

SL(f)61(069.538)

SL/24-4-a-6

66
—
6-84

CATALOGUE
OF
THE CONTENTS OF THE MUSEUM
OF
THE ROYAL COLLEGE OF SURGEONS
OF ENGLAND.

PART I.

PLANTS AND INVERTEBRATE ANIMALS IN THE DRIED STATE.



LONDON:
PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

1860.

Digitized by the Internet Archive
in 2015

ROYAL COLLEGE OF PHYSICIANS	
CLASS	61 (069.538)
DATE	

<https://archive.org/details/b24758061>

P R E F A C E.

THE present Volume, entitled "The Invertebrate Natural History in the Dried State," completes the series of Hunterian Catalogues. The specimens included in it consist of Plants and Invertebrate Animals, many of which, brought home by Cook, Banks, and White, and other voyagers, were presented to Mr. Hunter. To these is added a large collection of Corallines and Zoophytes, purchased by him at the sale of the effects of Mr. John Ellis. Numerous and valuable specimens have been obtained, both by donation and purchase, since the Collection was entrusted to the care of the Council of the College.

Many of the lowest forms of Plants, such as the Algæ and Nullipores, were the property of Mr. Ellis, and their names are still preserved in the handwriting of that gentleman and of Dr. Solander. Mr. Hunter had himself paid much attention to the structure and mode of growth of Plants, and in addition to many large sections of wood, and portions of the smaller branches of trees (probably growing in his own garden), upon all of which experiments had been performed, there remains a manuscript volume, copied from an original, which was mostly in his own handwriting, giving a detailed account of the experiments

and their effects. That this volume, entitled "The Natural History of Vegetables," was considered of consequence by Mr. Hunter, may be concluded from the circumstance that a book bearing that title is represented as supporting his elbow in the portrait by Sir Joshua Reynolds.

The lowest forms of animal life, the Protozoa, or Foraminifera, were but sparingly represented in Mr. Hunter's Museum; yet among the fossils there were specimens of *Orbitolites complanatus*. For nearly all the others, and for their descriptions in the Catalogue, the College is indebted to Mr. W. K. Parker and Mr. T. Rupert Jones. Of the larger forms, some were obtained by purchase from the Museum of Lieut. Chimmo, R.N., the others having been found, attached to seaweeds occurring on the reefs, at Rewa, Feejee Islands, whence they were brought, preserved in spirit, by Captain Sir E. Home, and thus afforded to Naturalists a more perfect view of the inhabitants of their component cells than had before been obtained.

Of the Porifera, or Sponges, Mr. Hunter's Collection, although not large, contained some specimens of considerable interest brought home by Sir Joseph Banks. This series has been augmented by donation and purchase; and the College is indebted to Dr. Bowerbank for numerous specimens, and also for the names of all those Sponges which had been previously undescribed.

The Polypifera, or Zoophytes, have received considerable additions within the last few years, no less than 130 specimens, principally belonging to the Gorgoniæ, having been presented by the late Charles Stokes, Esq.

Among the Stony Corals, there were numerous specimens illustrating the mode of repair after injury. They were at one time contained in a glass case by themselves, and no doubt were collected by Mr. Hunter with the view of displaying this interesting physiological fact, as examples both from plants and animals are included by him in the

Pathological series under the head of "Repair." Many of the Hunterian specimens were once the property of Mr. Ellis, at whose death Mr. Hunter secured not only some of the Plants and Corals, but also the original drawings of the work on Zoophytes, and of the engravings illustrating his papers in the 'Philosophical Transactions.' These drawings are remarkable for their beauty and truthfulness.

To the Echinodermata Mr. Hunter had paid considerable attention, as the dissected specimens in the Physiological series will show. Amongst the dried series must be enumerated the almost unique specimen of *Pentacrinus caput-Medusæ*, which was purchased by Mr. Hunter, at the sale of the Museum of the Duchess of Portland, for the sum of 15 guineas. In this series are many specimens of Starfish and Echini, which have been prepared and described by Mr. T. H. Stewart.

The large series of Mollusca consisted principally of specimens presented to him by Sir Joseph Banks and other voyagers. More recently the Collection has received numerous donations, especially from Capt. Sir E. Home, and other specimens have been added by purchase, as illustrative of certain typical genera of shells.

The Articulata, comprising the Insects, Spiders, Barnacles, Crustaceans, &c., are numerous represented in the Collection. In Mr. Hunter's time the Coleoptera and smaller Lepidoptera were contained in cabinets with separate compartments, and printed names affixed to each specimen.

Amongst the Hymenoptera are many specimens of Bees, upon which Mr. Hunter had experimented, and the descriptions are in his own handwriting. Captain Sir Everard Home has also been a large contributor to this series, as well as to the Crustacea; the latter include several new species.

This Volume contains descriptions of more than 2500 specimens, of which a large proportion belonged to Mr. Hunter. Although it

has been the last to be completed, it is the first in the present arrangement of the Museum, and should be the first consulted by the Student, as familiarizing him with the lowest forms under which vegetable and animal life are presented to his observation. The most competent authorities in the several branches of Natural History have readily and kindly afforded most valuable assistance in the difficult task of identifying so great a number of specimens.

The Protozoa, or Foraminifera, have been arranged and catalogued by Mr. W. K. Parker and Mr. T. Rupert Jones; and much aid has been afforded by Dr. Bowerbank in naming the Sponges. The whole of the Helianthoida, or Stony Corals, have been catalogued by Mr. E. W. H. Holdsworth, to whom a similar task has been entrusted at the British Museum. The Mollusca and Cirripedia have been named and catalogued by John Morris, F.G.S.; and the Articulata, through the courtesy of Dr. J. E. Gray, by Mr. Adam White of the British Museum. To all these gentlemen the Council of the College take this opportunity of offering their best acknowledgements.

The Conservator also feels that his best thanks are due to his two Assistants in the Museum, Mr. T. H. Stewart and Mr. James Murie, for their zealous and industrious aid throughout the progress of the work.

Royal College of Surgeons,
February 7, 1860.

CONTENTS.

PART I.

VEGETABLES IN THE DRY STATE.

Class I. THALLOGENS—ALGÆ.

Order I. DIATOMACEÆ.

Suborder I. *Cymbelleæ*.

Genus <i>Meridion</i>	page	2
<i>Isthmia</i>		2
<i>Arachnoidiscus</i>		2
<i>Actinocyclus</i>		2

Suborder II. *Desmidiæ*.

Genus <i>Xanthidium</i>	3
<i>Closterium</i>	3

Order II. CONFERVACEÆ.

Suborder I. *Palmelleæ*.

Genus <i>Protococcus</i>	3
------------------------------------	---

Suborder II. *Conferveæ*.

Genus <i>Hydrodictyon</i>	page 4
<i>Achlya</i>	4
<i>Conferva</i>	4

Suborder III. *Siphonææ*.

Genus <i>Acetabularia</i>	5
-------------------------------------	---

Order III. FUCACEÆ.

Suborder I. *Dasycladidæ*.

Genus <i>Neomeris</i>	5
---------------------------------	---

Suborder II. *Batrachospermidæ*.

Genus <i>Batrachospermum</i>	6
--	---

Suborder III. *Dictyotidæ*.

Genus <i>Padina</i>	6
-------------------------------	---

Suborder IV. *Fucidæ*.

Genus <i>Fucus</i>	6
------------------------------	---

Suborder V. *Cystoseiridæ*.

Genus <i>Sargassum</i>	6
----------------------------------	---

Order IV. CERAMIACEÆ.

Suborder I. *Ceramieæ*.

Genus <i>Ceramium</i>	7
<i>Ptilota</i>	7
<i>Chondrus</i>	8
<i>Gigartina</i>	8
<i>Halymenia</i>	8

Suborder II. *Delesserieæ*.

Genus <i>Plocamium</i>	8
<i>Polyides</i>	9
<i>Delesseria</i>	9

Suborder III. *Rhodomeleæ*.

Genus <i>Polysiphonia</i>	9
<i>Corallina</i>	10

Genus <i>Jania</i>	page 11
<i>Amphiroa</i>	11
<i>Halimeda</i>	12
Suborder IV. <i>Nulliporeæ</i> .	
Genus <i>Melobesia</i>	13
Order V. CHARACEÆ.	
Genus <i>Nitella</i>	15
<i>Chara</i>	16
Order VI. FUNGI.	
Genus <i>Uredo</i>	17
<i>Puccinia</i>	18
<i>Oidium</i>	18
<i>Peziza</i>	18
<i>Polyporus</i>	19
<i>Dædalea</i>	20
<i>Hypoxydon</i>	21
<i>Nidularia</i>	21
<i>Achorion</i>	22
<i>Sphæria</i>	23
Order VII. LICHENS.	
Family I. <i>Idiothalameæ</i> .	
Genus <i>Opegrapha</i>	25
Family II. <i>Hymenothalameæ</i> .	
Genus <i>Lecidea</i>	25
<i>Scyphophorus</i>	26
<i>Stereocaulon</i>	26
<i>Parmelia</i>	26
<i>Lecanora</i>	26
<i>Sticta</i>	27
<i>Cetraria</i>	27
<i>Roccella</i>	27
<i>Usnea</i>	27
<i>Alectoria</i>	28

Class II. ACROGENS.

Order I. MUSCALES.

Family I. <i>Ricciaceæ</i> .	
Genus <i>Riccia</i>	page 28
Family II. <i>Marchantiaceæ</i> .	
Genus <i>Marchantia</i>	29
Family III. <i>Jungermanniaceæ</i> .	
Genus <i>Jungermannia</i>	29
Family IV. <i>Equisetaceæ</i> .	
Genus <i>Equisetum</i>	30
Family V. <i>Bryaceæ</i> .	
Genus <i>Weissia</i>	31
<i>Funaria</i>	31
<i>Polytrichum</i>	31
<i>Dawsonia</i>	31
<i>Neckera</i>	31
<i>Hookeria</i>	31
Family VI. <i>Lycopodiaceæ</i> .	
Genus <i>Lycopodium</i>	32
Family VII. <i>Marsileaceæ</i> .	
Genus <i>Pilularia</i>	32
<i>Isoetes</i>	32

Order II. FILICALES.

Family I. <i>Ophioglossaceæ</i> .	
Genus <i>Ophioglossum</i>	33
Family II. <i>Polypodiaceæ</i> .	
Genus <i>Polypodium</i>	33
<i>Asplenium</i>	34
<i>Ceterach</i>	34
<i>Dicksonia</i>	34

Class III. RHIZOGENS.

Order I. BALANOPHORACEÆ.

Family *Cynomoridæ*.

Genus *Cynomorium* page 35

Class IV. ENDOGENS—MONOCOTYLEDONS.

Order I. GRAMINACEÆ.

Family I. *Oryzæ*.

Genus *Oryza* 36

Family II. *Phalaridæ*.

Genus *Zea* 37

Family III. *Arundinæ*.

Genus *Arundinaria* 37

Family IV. *Andropogonæ*.

Genus *Saccharum* 38

Bambusa 38

Order II. CYPERACEÆ.

Family *Cypereæ*.

Genus *Papyrus* 39

Order III. PISTIACEÆ.

Genus *Lemna* 40

Order IV. TYPHACEÆ.

Genus *Typha* 40

Order V. PANDANACEÆ.

Genus *Pandanus* 40

Order VI. PALMACEÆ.

Family I. *Areceæ*.Genus *Areca* page 41Family II. *Calameæ*.Genus *Sagus* 42Family III. *Borasseæ*.Genus *Borassus* 43Family IV. *Phœnicidæ*.Genus *Phœnix* 44Family V. *Cocoeæ*.Genus *Eläis* 44*Cocos* 44*Phytelephas* 45*Saguerus* 46

Order VII. AMARYLLIDACEÆ.

Family *Agaveæ*.Genus *Agave* 47

Order VIII. MUSACEÆ.

Family *Uraneæ*.Genus *Musa* 48

Order IX. MARANTACEÆ.

Genus *Maranta* 49

Order X. JUNCACEÆ.

Genus *Juncus* 49

Order XI. LILIACEÆ.

Family *Asparageæ*.Genus *Dracæna* 50

Order XII. JUNCAGINACEÆ.

Genus *Ouvirandra* 50

Class V. DICTYOGENS.

Order XIII. SMILACEÆ.

Genus *Smilax* page 51

Order XIV. DIOSCOREACEÆ.

Genus *Testudinaria* 51

Class VI. GYMNOGENS.

Order XV. CYCADEÆ.

Genus *Cycas* 52
Encephalartos 53
Zamia 53

Order XVI. PINACEÆ—CONIFERÆ.

Genus *Pinus* 54
Cupressus 55
Abies 56
Araucaria 57
Dammara 57

Order XVII. TAXACEÆ.

Genus *Taxus* 57

Order XVIII. GNETACEÆ.

Genus *Ephedra* 58

Class VII. EXOGENS.

Order XIX. BETULACEÆ.

Genus *Betula* 59

Order XX. SALICACEÆ.

Genus *Salix* page 60

Order XXI. URTICACEÆ.

Genus *Bæhmeria* 60

Order XXII. ARTOCARPACEÆ.

Genus *Cecropia* 61*Brosimum* 62

Order XXIII. CORYLACEÆ.

Genus *Fagus* 62*Quercus* 62

Order XXIV. JUGLANDACEÆ.

Genus *Juglans* 64

Order XXV. MENISPERMACEÆ.

Genus *Cissampelos* 64

Order XXVI. EUPHORBIACEÆ.

Genus *Buxus* 65

Order XXVII. BRASSICACEÆ.

Genus *Brassica* 65

Order XXVIII. STERCULIACEÆ.

Genus *Adansonia* 65

Order XXIX. TILIACEÆ.

Genus *Tilia* 66

Order XXX. SAPINDACEÆ.

Genus *Ophiocaryon* 66

Order XXXI. CLUSIACEÆ.

Genus *Pentadesma* page 67

Order XXXII. ZYGOPHYLLACEÆ.

Genus *Guaiacum* 67*Lagetta* 67

Order XXXIII. LAURACEÆ.

Genus *Camphora* 68

Order XXXIV. FABACEÆ.

Family I. *Hedysareæ*.Genus *Cytisus* 68Genus *Æschynomene* 69Family II. *Acaciæ*.Genus *Acacia* 69*Mimosa* 70

Order XXXV. DRUPACEÆ.

Genus *Cerasus* 70*Prunus* 70

Order XXXVI. ROSACEÆ.

Genus *Rosa* 71*Quillaia* 71

Order XXXVII. ULMACEÆ.

Genus *Ulmus* 72

Order XXXVIII. EBENACEÆ.

Genus *Diospyrus* 72*Sacandra* 72

Order XXXIX. AQUIFOLIACEÆ.

Genus *Ilex* 73

Order XL. OLEACEÆ.

Family *Fraxineæ*.Genus *Fraxinus* page 73

Order XLI. SOLANACEÆ.

Genus *Mandragora* 75

Order XLII. BIGNONIACEÆ.

Genus *Calosanthus* 75

Order XLIII. HALORAGACEÆ.

Genus *Trapa* 76

Order XLIV. MYRTACEÆ.

Genus *Eucalyptus* 76

Order XLV. LECYTHIDACEÆ.

Genus *Bertholletia* 77

Order XLVI. CAPRIFOLIACEÆ.

Genus *Sambucus* 77

Order XLVII. ARALIACEÆ.

Genus *Aralia* 77*Hedera* 78

Order XLVIII. PROTEACEÆ.

Genus *Xylomelum* 79*Banksia* 79

Order XLIX. LEGUMINOSÆ.

Genus *Hymenæa* 79

Order L. LORANTHACEÆ.

Family *Viscaceæ*.Genus *Viscum* 79*Myzodendron* 80

Order LI. OROBANCHACEÆ.

Genus <i>Lathræa</i>	page 81
--------------------------------	---------

Order LII. CUSCUTACEÆ.

Genus <i>Cuscuta</i>	82
<i>Inflorescence of Plants</i>	82
<i>Pollen of Plants</i>	82
<i>Specimens showing the effects of partial removal of the bark</i>	82
<i>Woods used for Medicinal and other purposes</i>	83
<i>Fabrics made from the inner bark of trees</i>	83
<i>Fibrous Skeletons of Plants</i>	84
<i>Siliceous Skeletons of Plants</i>	85
<i>Plants which have been subjected to intense heat</i>	86

P A R T II.

RECENT INVERTEBRATA.

Class I. PROTOZOA.

Order RHIZOPODA.

Suborder *Foraminifera*.

Genus <i>Lagena</i>	88
<i>Nodosaria</i>	88
<i>Polymorphina</i>	88
<i>Polytrema</i>	88
<i>Rotalia</i>	89
<i>Calcarina</i>	89
<i>Asterigerina</i>	89
<i>Amphistegina</i>	90
<i>Operculina</i>	90
<i>Nonionina</i>	90
<i>Polystomella</i>	90

Genus <i>Cristellaria</i>	page 91
<i>Orbulina</i>	91
<i>Globigerina</i>	91
<i>Planorbulina</i>	91
<i>Cassidulina</i>	92
<i>Valvulina</i>	92
<i>Clavulina</i>	93
<i>Bulimina</i>	93
<i>Uvigerina</i>	93
<i>Textularia</i>	93
<i>Cornuspira</i>	93
<i>Hauerina</i>	94
<i>Vertebralina</i>	94
<i>Sphæroidina</i>	94
<i>Miliola</i>	94
<i>Amorphina</i>	95
<i>Orbitolites</i>	95
<i>Polytrype</i>	95
<i>Orbiculina</i>	95
<i>Peneroplis</i>	96
<i>Alveolina</i>	96
<i>Placopsilina</i>	96
<i>Carpenteria</i>	96

Class II. PORIFERA—SPONGES.

Division I.

Genus <i>Spongia</i>	99
----------------------	----

Division II.

<i>Sponges of the variety known as Turkey Honeycomb</i>	100
---	-----

Division III.

<i>Bahama Sponges</i>	101
-----------------------	-----

Division IV.

<i>Sponges allied to the genus Spongia, but differing from them slightly in the nature of their skeleton . . .</i>	page 102
--	----------

Division V.

<i>Fistulose Sponges</i>	103
------------------------------------	-----

Division VI.

<i>Sponges of pyriform shape, abounding in fragments of spicula and silex</i>	104
---	-----

Division VII.

Sponges in which the fibre is large and tubular.

Genus <i>Verongia</i>	106
<i>Spongilla</i>	107
<i>Halichondria</i>	109
<i>Cup-shaped Sponges belonging to the Genus Halichondria . . .</i>	112
<i>Sponges allied to those of the Genus Halichondria . . .</i>	113
<i>Sponges with tuberculated Spicula</i>	116
Genus <i>Dictyocylinrus</i>	118
<i>Hymeniacion</i>	119
<i>Raphyrus</i>	119
<i>Stematomenia</i>	123
<i>Dysidea</i>	123
<i>Cliona</i>	125
<i>Pachymatisma</i>	126
<i>Ecionemia</i>	127
<i>Tethea</i>	127
<i>Geodia</i>	128
<i>Grantia</i>	129
<i>Leuconia</i>	130
<i>Leucosolenia</i>	130
<i>Dactylocalyx</i>	130
<i>Siliceous Sponges—parasitic</i>	131
<i>Undescribed Sponges with peculiar spicula</i>	131

Class III. POLYPIFERA—ZOOPHYTES.

ANTHOZOA.

Order I. HYDROIDA.

Family *Coryniadæ*.Genus *Cordylophora* page 133Family *Tubulariadæ*.Genus *Tubularia* 133Family *Sertulariadæ*.Genus *Halecium* 134*Sertularia* 134*Antennularia* 136*Plumularia* 137Family *Campanulariadæ*.Genus *Laomedea* 137*Campanularia* 138

Order II. ASTEROIDA.

Family *Pennatulidæ*.Genus *Pennatula* 138*Virgularia* 139*Pavonaria* 141Family *Antipathidæ*.Genus *Antipathes* 142Family *Gorgoniadæ*.Genus *Gorgonia* 145*Melitæa* 169*Isis* 173Family *Tubiporidæ*.Genus *Tubipora* 175Family *Alcyonidæ*.Genus *Xenia* 176*Alcyonium* 177

Order III. HELIANTHOIDA.

Tribe I. *Madreporacea*.Family *Poritidæ*.Genus *Porites* page 180Family *Favositidæ*.Genus *Pocillopora* 181*Alveopora* 183Family *Madreporidæ*.Genus *Manopora* 184*Madrepora* 184Tribe II. *Caryophyllacea*.Genus *Gemmipora* 190*Anthophyllum* 191*Oculina* 192*Dendrophyllia* 193*Cyathina* 193*Stephanophyllia* 194Tribe III. *Astreacea*.Family I. *Fungidæ*.Genus *Mycedia* 194*Agaricia* 195*Pavonia* 195*Psammocora* 196*Polyphyllia* 196*Herpetolithus* 197*Fungia* 198*Echinopora* 200*Merulina* 201*Monticularia* 202*Meandrina* 202*Astræa* 204*Tridacophyllia* 205

Genus <i>Manicina</i>	. . . . .	page 205
<i>Mussa</i>	. . . . .	206
<i>Ctenophyllia</i>	. . . . .	207
<i>Euphyllia</i>	. . . . .	207
<i>Millepora</i>	. . . . .	208

Class IV. ECHINODERMATA—ECHINODERMS.

Order I. PINNIGRADA.

Family *Pentacrinidæ*.

Genus <i>Pentacrinus</i>	. . . . .	210
<i>Comatula</i>	. . . . .	211

Order II. SPINIGRADA.

Family I. *Ophiuridæ*.

Genus <i>Ophiura</i>	. . . . .	212
<i>Ophiocoma</i>	. . . . .	213

Family II. *Euryales*.

Genus <i>Astrophyton</i>	215
--------------------------	-----------	-----

Order III. CIRRHIGRADA.

Family I. *Asteriadæ*.

Genus <i>Uraster</i>	215
----------------------	-----------	-----

Family II. *Solasteriæ*.

Genus <i>Cribella</i>	. . . . .	218
<i>Solaster</i>	. . . . .	218

Family III. *Goniasteriæ*.

Genus <i>Palmipes</i>	. . . . .	220
<i>Asterina</i>	. . . . .	221
<i>Goniaster</i>	. . . . .	222
<i>Asterias</i>	. . . . .	223
<i>Luidia</i>	. . . . .	224

Order IV. CIRRH-SPINIGRADA.—ECHINIDÆ.

Family I. *Cidaridæ*.

Genus <i>Cidaris</i>	page 225
<i>Diadema</i>	228

Family II. *Echinidæ*.

Genus <i>Echinus</i>	228
<i>Tripneustes</i>	233
<i>Temnopleurus</i>	233
<i>Mespilia</i>	234
<i>Acrocladia</i>	234
<i>Podophora</i>	235

Family III. *Clypeasteriæ*.

Genus <i>Echinocyamus</i>	242
<i>Clypeaster</i>	243
<i>Laganum</i>	244

Family IV. *Scutellidæ*.

Genus <i>Echinodiscus</i>	245
<i>Encope</i>	245
<i>Mellita</i>	246

Family V. *Spatangidæ*.

Genus <i>Spatangus</i>	246
<i>Schizaster</i>	247
<i>Amphidetes</i>	247
<i>Brissus</i>	247

Order V. HOLOTHURIADÆ.

Family I. *Pentactæ*.

Genus <i>Cucumaria</i>	248
<i>Ocnus</i>	248

Family II. *Thyonidæ*.

Genus <i>Thyone</i>	248
<i>Holothuria</i>	249

Subkingdom MOLLUSCA.

Subdivision MOLLUSCOIDEA.

Class I. BRYOZOA.

Order I. GYMNOLÆMATA.

Suborder I. CHEILOSTOMATA.

Family *Catenicellidæ*.Genus *Catenicella* page 252Family *Scrupariadæ*.Genus *Ætea* 253*Beania* 253Family *Salicornariadæ*.Genus *Salicornaria* 254Family *Cellulariadæ*.Genus *Menipœa* 254*Scrupocellaria* 254*Caberea* 254*Cellularia* 254Family *Bicellariadæ*.Genus *Bugula* 255Family *Gemellariadæ*.Genus *Gemellaria* 256*Notamia* 257Family *Flustradæ*.Genus *Flustra* 257*Carbasea* 257Family *Membraniporidæ*.Genus *Membranipora* 257Family *Celleporidæ*.Genus *Cellepora* 258

Family *Escharidæ*.

Genus <i>Eschara</i>	page 258
<i>Retepora</i>	258

Suborder II. CYCLOSTOMATA.

Family *Tubuliporidæ*.

Genus <i>Tubulipora</i>	259
-----------------------------------	-----

Suborder III. CTENOSTOMATA.

Family *Vesiculariadæ*.

Genus <i>Serialaria</i>	259
<i>Bowerbankia</i>	259

Family *Paludicellidæ*.

Genus <i>Paludicella</i>	260
------------------------------------	-----

Family *Urnatellidæ*.

Order II. PHYLACTOLÆMATA.

Suborder LOPHOPHEA.

Family *Plumatellidæ*.

Genus <i>Alcyonella</i>	260
-----------------------------------	-----

Family *Pedicellinidæ*.

Class II. TUNICATA.

Family *Asciadiadæ*.

Genus <i>Ascidia</i>	262
--------------------------------	-----

Family *Clavellinidæ*.

Genus <i>Clavellina</i>	262
-----------------------------------	-----

Family *Botryllidæ*.

Genus <i>Botryllus</i>	263
<i>Aplidium</i>	263

Family *Pyrosomidæ*.

Genus <i>Pyrosoma</i>	263
---------------------------------	-----

Family *Salpidæ*.

Genus <i>Salpa</i>	page 264
------------------------------	----------

Class III. BRACHIOPODA.

Family *Terebratulidæ*.

Genus <i>Terebratula</i>	266
<i>Waldheimia</i>	266
<i>Terebratulina</i>	267
<i>Terebratella</i>	267

Family *Craniadæ*.

Genus <i>Crania</i>	268
-------------------------------	-----

Family *Rhynchonellidæ*.

Genus <i>Rhynchonella</i>	268
-------------------------------------	-----

Family *Lingulidæ*.

Genus <i>Lingula</i>	269
--------------------------------	-----

Family *Discinidæ*.

Genus <i>Discina</i>	269
--------------------------------	-----

Subdivision MOLLUSCA PROPER.

Class IV. LAMELLIBRANCHIATA.

Family *Ostreidæ*.

Genus <i>Ostrea</i>	270
<i>Anomia</i>	271
<i>Pecten</i>	272
<i>Placuna</i>	273
<i>Lima</i>	273
<i>Spondylus</i>	274
<i>Pedum</i>	275
<i>Plicatula</i>	275

Family *Aviculidæ*.

Genus <i>Avicula</i>	page 276
<i>Meleagrina</i>	276
<i>Malleus</i>	277
<i>Vulsella</i>	277
<i>Perna</i>	278
<i>Crenatula</i>	278
<i>Pinna</i>	278

Family *Mytilidæ*.

Genus <i>Mytilus</i>	279
<i>Modiola</i>	280
<i>Lithodomus</i>	281
<i>Dreissena</i>	281

Family *Arcadæ*.

Genus <i>Arca</i>	282
<i>Cucullæa</i>	283
<i>Pectunculus</i>	283
<i>Solenella</i>	284
<i>Solemya</i>	284
<i>Nucula</i>	285
<i>Leda</i>	285

Family *Trigonidæ*.

Genus <i>Trigonia</i>	285
---------------------------------	-----

Family *Unionidæ*.

Genus <i>Unio</i>	286
Subgenus <i>Symphynota</i> .	
Subgenus <i>Alasmodon</i> .	
Genus <i>Hyria</i>	287
<i>Castalia</i>	287
<i>Anodon</i>	288
<i>Iridina</i>	288
<i>Pleiodon</i>	288
<i>Ætheria</i>	288

Family <i>Chamidae</i> .	
Genus <i>Chama</i>	page 289
Family <i>Tridacnidae</i> .	
Genus <i>Tridacna</i>	290
<i>Hippopus</i>	290
Family <i>Cardiidae</i> .	
Genus <i>Cardium</i>	291
Family <i>Lucinidae</i> .	
Genus <i>Corbis</i>	293
<i>Lucina</i>	293
Family <i>Cycladidae</i> .	
Genus <i>Cyrena</i>	295
<i>Cyclas</i> and <i>Pisidium</i>	296
Family <i>Astartidae</i> .	
Genus <i>Astarte</i>	297
<i>Crassatella</i>	297
Family <i>Cyprinidae</i> .	
Genus <i>Cyprina</i>	297
<i>Circe</i>	297
<i>Isocardia</i>	298
<i>Cypricardia</i>	298
<i>Cardita</i>	298
Family <i>Veneridae</i> .	
Genus <i>Venus</i>	299
<i>Meroë</i>	301
<i>Cytherea</i>	301
<i>Artemis</i>	302
<i>Tapes</i>	303
<i>Venerupis</i>	304
<i>Petricola</i>	304
<i>Glaucomya</i>	304
Family <i>Mactridae</i> .	
Genus <i>Mactra</i>	304

Genus <i>Gnathodon</i>	. . . . .	page 305
<i>Lutraria</i>	. . . . .	305
Family <i>Tellinidæ</i> .		
Genus <i>Tellina</i>	. . . . .	306
<i>Psammobia</i>	. . . . .	307
<i>Sanguinolaria</i>	. . . . .	308
<i>Amphidesma</i>	. . . . .	308
<i>Cumingia</i>	. . . . .	308
<i>Scrobicularia</i>	. . . . .	309
<i>Mesodesma</i>	. . . . .	309
<i>Donax</i>	. . . . .	309
<i>Galatæa</i>	. . . . .	310
Family <i>Solenidæ</i> .		
Genus <i>Solen</i>	. . . . .	310
<i>Cultellus</i>	. . . . .	311
<i>Solecurtus</i>	. . . . .	311
Family <i>Myacidæ</i> .		
Genus <i>Mya</i>	. . . . .	312
<i>Corbula</i>	. . . . .	312
<i>Panopæa</i>	. . . . .	313
<i>Saxicava</i>	. . . . .	313
Family <i>Anatinidæ</i> .		
Genus <i>Thracia</i>	. . . . .	314
<i>Lyonsia</i>	. . . . .	314
<i>Pandora</i>	. . . . .	314
<i>Myadora</i>	. . . . .	314
<i>Myochama</i>	. . . . .	315
<i>Chamostræa</i>	. . . . .	315
Family <i>Gastrochænidæ</i> .		
Genus <i>Gastrochæna</i>	. . . . .	315
<i>Clavagella</i>	. . . . .	315
<i>Aspergillum</i>	. . . . .	316

Family *Pholadidae*.

Genus <i>Pholas</i>	page 316
<i>Pholadidea</i>	317
<i>Xylophaga</i>	318
<i>Teredo</i>	318

Class V. PTEROPODA.

Section A. THECOSOMATA.

Family *Hyaleidae*.

Genus <i>Hyalea</i>	320
<i>Cleodora</i>	321

Genus <i>Cheletropis</i>	321
------------------------------------	-----

Section B. GYMNOSOMATA.

Family *Cliidae*.

Genus <i>Clio</i>	322
-----------------------------	-----

Class VI. GASTEROPODA.

Order I. NUCLEOBRANCHIATA.

Family *Firolidae*.

Genus <i>Carinaria</i>	323
----------------------------------	-----

Family *Atlantidae*.

Genus <i>Atlanta</i>	323
--------------------------------	-----

Order II. OPISTHOBRANCHIATA.

Section A. NUDIBRANCHIATA.

Family *Æolidæ*.

Genus <i>Æolis</i>	324
------------------------------	-----

Family *Tritoniadæ*.Genus *Tritonia* page 324Family *Doridæ*.Genus *Doris* 324

Section B. TECTIBRANCHIATA.

Family *Pleurobranchidæ*.Genus *Pleurobranchus* 325*Umbrella* 325Family *Aplysiadæ*.Genus *Aplysia* 325*Dolabella* 325Family *Bullidæ*.Genus *Bulla* 326Family *Tornatellidæ*.Genus *Tornatella* 327

Order III. PULMONIFERA.

Section A. OPERCULATA.

Family *Cyclostomidæ*.Genus *Cyclostoma* 328*Cyclophorus* 328*Helicina* 328

Section B. INOPERCULATA.

Family *Auriculidæ*.Genus *Auricula* 329*Conovulus* 329Family *Limnæidæ*.Genus *Limnæa* 330*Chilinia* 330*Ancylus* 330*Planorbis* 331*Physa* 331

Family *Limacidæ*.Genus *Testacella* page 332Family *Helicidæ*.Genus *Clausilia* 332*Pupa* 332*Achatina* 333*Bulimus* 333*Partula* 336*Achatinella* 336*Succinea* 337*Vitrina* 337*Helix* 338

Order IV. PROSOBRANCHIATA.

Section A. HOLOSTOMATA.

Family *Chitonidæ*.Genus *Chiton* 340Family *Dentaliadæ*.Genus *Dentalium* 342Family *Patellidæ*.Genus *Patella* 343*Siphonaria* 345Family *Calyptræidæ*.Genus *Calyptræa* 346*Crepidula* 347*Pileopsis* 348*Hipponyx* 348Family *Fissurellidæ*.Genus *Fissurella* 349*Parmophorus* 350*Emarginula* 351Family *Haliotidæ*.Genus *Haliotis* 351*Ianthina* 353

Family *Turbinidæ*.

Genus <i>Turbo</i>	page 354
<i>Phasianella</i>	355
<i>Imperator</i>	356
<i>Trochus</i>	356
<i>Monodonta</i>	357
<i>Delphinula</i>	358
<i>Elenchus</i>	358
<i>Rotella</i>	359

Family *Neritidæ*.

Genus <i>Nerita</i>	359
<i>Navicella</i>	361
<i>Neritina</i>	361
<i>Neritopsis</i>	363

Family *Paludinidæ*.

Genus <i>Paludina</i>	364
Subgenus <i>Bithynia</i>	364
Genus <i>Ampullaria</i>	364
<i>Amphibola</i>	365

Family *Litorinidæ*.

Genus <i>Litorina</i>	365
<i>Solarium</i>	366
<i>Phorus</i>	367

Family *Turritellidæ*.

Genus <i>Turritella</i>	367
<i>Scalaria</i>	368

Family *Melaniadæ*.

Genus <i>Melania</i>	368
<i>Melanopsis</i>	368
<i>Pirena</i>	369

Family *Cerithiadæ*.

Genus <i>Cerithium</i>	369
----------------------------------	-----

Family *Pyramidellidæ*.

Genus <i>Pyramidella</i>	page 370
<i>Eulima</i>	371
<i>Stylina</i>	371

Family *Naticidæ*.

Genus <i>Natica</i>	371
<i>Sigaretus</i>	373
<i>Narica</i>	373

Section B. SIPHONOSTOMATA.

Family *Cypræidæ*.

Genus <i>Ovulum</i>	374
<i>Erato</i>	374
<i>Cypræa</i>	375
<i>Trivia</i>	380

Family *Volutidæ*.

Genus <i>Voluta</i>	381
<i>Melo</i>	382
<i>Cymba</i>	382
<i>Mitra</i>	383
<i>Marginella</i>	385
<i>Conohelix</i>	385

Family *Conidæ*.

Genus <i>Conus</i>	385
<i>Pleurotoma</i>	390

Family *Aporrhaidæ*.

Genus <i>Aporrhais</i>	391
<i>Struthiolaria</i>	391

Family *Buccinidæ*.

Genus <i>Buccinum</i>	391
<i>Cominella</i>	392
<i>Terebra</i>	392
<i>Eburna</i>	395
<i>Planaxis</i>	395

Genus <i>Nassa</i>	. . . . .	page 395
<i>Phos</i>	. . . . .	396
<i>Purpura</i>	. . . . .	396
<i>Concholepas</i>	. . . . .	399
<i>Monoceros</i>	. . . . .	399
<i>Ricinula</i>	. . . . .	400
<i>Magilus</i>	. . . . .	400
<i>Cassis</i>	. . . . .	401
<i>Oniscia</i>	. . . . .	402
<i>Dolium</i>	. . . . .	402
<i>Harpa</i>	. . . . .	404
<i>Columbella</i>	. . . . .	404
<i>Oliva</i>	. . . . .	405
<i>Ancillaria</i>	. . . . .	407

Family *Muricidæ*.

Genus <i>Murex</i>	. . . . .	407
<i>Pisania</i>	. . . . .	410
<i>Ranella</i>	. . . . .	410
<i>Triton</i>	. . . . .	411
<i>Typhis</i>	. . . . .	414
<i>Fasciolaria</i>	. . . . .	414
<i>Cancellaria</i>	. . . . .	414
<i>Turbinella</i>	. . . . .	415
<i>Pyrula</i>	. . . . .	416
<i>Fusus</i>	. . . . .	417
Subgenus <i>Trophon</i>	. . . . .	418
<i>Chrysodomus</i>	. . . . .	419

Family *Strombidæ*.

Genus <i>Pterocera</i>	. . . . .	419
<i>Strombus</i>	. . . . .	421
<i>Rostellaria</i>	. . . . .	424
<i>Seraphs</i>	. . . . .	424
<i>Opercula</i>	. . . . .	424

<i>Opercula composed of horny material</i>	page 425
<i>Calcareous opercula</i>	425

Class VII. CEPHALOPODA.

Order TETRABRANCHIATA.

Family *Nautilidæ*.

Genus <i>Nautilus</i>	426
---------------------------------	-----

Order DIBRANCHIATA.

Section I. OCTOPODA.

Genus <i>Octopus</i>	427
<i>Argonauta</i>	427

Section II. DECAPODA.

Family *Spirulidæ*.

Genus <i>Spirula</i>	428
--------------------------------	-----

Family *Sepiadæ*.

Genus <i>Sepia</i>	428
------------------------------	-----

Family *Teuthidæ*.

Genus <i>Sepiola</i>	428
<i>Loligo</i>	429
<i>Onychoteuthis</i>	429

<i>Sections of Shells</i>	429
<i>Shells illustrating repair</i>	433
<i>Structure of Pearls</i>	435
<i>Animal matter of Shell</i>	436
<i>Earthy matter of Shell</i>	436
<i>Shells thickened to withstand the action of boring animals</i> . .	436
<i>Oyster Pearls</i>	437
<i>Mussel Pearls</i>	439
<i>Pearls produced artificially</i>	441
<i>Spurious Pearls</i>	442

Subkingdom ARTICULATA.

Class I. INSECTA.

MANDIBULATA.

Order COLEOPTERA.

Section *Pentamera*.

Group	<i>Geodephaga</i>	. . . . .	page	445
	<i>Hydradephaga</i>	. . . . .		448
	<i>Palpicornia</i>	. . . . .		448
	<i>Brachyletra</i>	. . . . .		448
Family	<i>Staphylinidæ</i>	. . . . .		448
	<i>Silphidæ</i>	. . . . .		449
	<i>Byrrhidæ</i>	. . . . .		450
	<i>Dermestidæ</i>	. . . . .		450
	<i>Histeridæ</i>	. . . . .		450
	<i>Lycidæ</i>	. . . . .		450
	<i>Telephoridæ</i>	. . . . .		451
	<i>Melyridæ</i>	. . . . .		451
	<i>Elateridæ</i>	. . . . .		451
	<i>Buprestidæ</i>	. . . . .		452

Section *Lamellicornia*.

Family	<i>Scarabæidæ</i>	. . . . .		454
	<i>Trogidæ</i>	. . . . .		454
	<i>Dynastidæ</i>	. . . . .		454
	<i>Melitophila</i>	. . . . .		456
	<i>Rutellidæ</i>	. . . . .		458
	<i>Melolonthidæ</i>	. . . . .		458
	<i>Lucanidæ</i>	. . . . .		459
	<i>Passalidæ</i>	. . . . .		459

Section *Heteromera*.

Family <i>Melosomata</i>	page 452
<i>Vesicantia</i>	460

Section *Rhynchophora*.

Family <i>Orthoceri</i>	461
<i>Curculionidæ</i>	461

Group *Longicornia*.

Family <i>Prionidæ</i>	462
<i>Cerambycidæ</i>	463
<i>Lamiidæ</i>	464
<i>Lepturidæ</i>	466

Group *Phytophaga*.

Family <i>Sagridæ</i>	466
<i>Cassididæ</i>	466

Order ORTHOPTERA.

Section *Cursoria*.

Family <i>Blattidæ</i>	466
----------------------------------	-----

Section *Raptoria*.

Family <i>Mantidæ</i>	467
---------------------------------	-----

Section *Ambulatoria*.

Family <i>Phasmidæ</i>	467
----------------------------------	-----

Section *Saltatoria*.

Family <i>Achetidæ</i>	467
<i>Gryllidæ</i>	467
<i>Locustidæ</i>	468

Order NEUROPTERA.

Family <i>Hemerobiidæ</i>	468
<i>Myrmeleonidæ</i>	468
<i>Libellulidæ</i>	468

Order HYMENOPTERA.

Family <i>Tenthredinidæ</i>	page 470
<i>Ichneumonidæ</i>	470
<i>Chrysididæ</i>	470
<i>Pompilidæ</i>	471

HAUSTELLATA.

Order LEPIDOPTERA.

Section *Rhopalocera*.

Family <i>Papilionidæ</i>	471
<i>Coliadæ</i>	473
<i>Danaidæ</i>	474
<i>Heliconidæ</i>	474
<i>Nymphalidæ</i>	475
<i>Morphidæ</i>	478
<i>Brassolidæ</i>	478
<i>Satyridæ</i>	478
<i>Lycænidæ</i>	479
<i>Thecladæ</i>	479
<i>Erycinidæ</i>	479
<i>Hesperidæ</i>	480

Section *Heterocera*.

Family <i>Sphingidæ</i>	480
<i>Glaucopidæ</i>	480
<i>Notodontidæ</i>	480
<i>Bombycidæ</i>	481
<i>Geometridæ</i>	484
<i>Pyalidæ</i>	486
<i>Tortricidæ</i>	487

Order HEMIPTERA.

Group *Geocorisæ*.

Family <i>Pentatomidæ</i>	page 487
<i>Miridæ</i>	487
<i>Reduviidæ</i>	488
<i>Hydrometridæ</i>	488

Group *Hydrocorisæ*.

Family <i>Nepidæ</i>	489
--------------------------------	-----

Order HOMOPTERA.

Family <i>Cicadidæ</i>	489
<i>Fulgoridæ</i>	489
<i>Membracidæ</i>	490
<i>Cercopidæ</i>	490

Class II. CRUSTACEA.

MALACOSTRACA.

PODOPHTHALMA.

Order I. DECAPODA.

Section BRACHYURA.

Family *Inachidæ*.

Genus <i>Egeria</i>	491
-------------------------------	-----

Family *Maiadæ*.

Genus <i>Chionæcetes</i>	491
<i>Mithrax</i>	491
<i>Stenorhynchus</i>	492
<i>Acanthonyx</i>	492

Family *Parthenopidæ*.

Genus <i>Lambrus</i>	492
<i>Cryptopodia</i>	493

Family *Canceridæ*.

Genus <i>Carpilius</i>	page 493
<i>Chlorodius</i>	493
<i>Cancer</i>	493
<i>Pilumnus</i>	493
<i>Eriphia</i>	493

Family *Portunidæ*.

Genus <i>Portunus</i>	494
<i>Neptunus</i>	494
<i>Amphitrite</i>	494
<i>Achelous</i>	494
<i>Thalamita</i>	495

Family *Gecarcinidæ*.

<i>Gecarcinus</i>	495
-----------------------------	-----

Family *Ocypodidæ*.

Genus <i>Ocypode</i>	495
--------------------------------	-----

Family *Grapsidæ*.

Genus <i>Grapsus</i>	495
<i>Nautilograpsus</i>	495

Family *Calappidæ*.

Genus <i>Calappa</i>	495
--------------------------------	-----

Family *Leucosiadæ*.

Genus <i>Philyra</i>	496
<i>Leucosia</i>	496
<i>Ixia</i>	496
<i>Ilia</i>	496
<i>Myra</i>	496

Family *Corystidæ*.

Genus <i>Corystes</i>	496
---------------------------------	-----

Family *Dorippidæ*.

Genus <i>Dorippe</i>	497
--------------------------------	-----

Section ANOMOURA.

Family *Dromiadæ*.Genus *Dromia* page 497Family *Homolidæ*.Genus *Echidnocerus* 497Family *Raninidæ*.Genus *Raninoides* 497Family *Pterygura*.Genus *Pagurus* 497*Birgus* 498Family *Porcellanidæ*.Genus *Porcellana* 498*Megalopa* 498

Section MACROURA.

Family *Scyllaridæ*.Genus *Scyllarus* 498*Thenus* 499*Ibacus* 499*Parribacus* 499Family *Palinuridæ*.Genus *Palinurus* 499Family *Thalassinidæ*.Genus *Thalassina* 499Family *Astacidæ*.Genus *Astacus* 500*Nephrops* 500Family *Penæidæ*.Genus *Penæus* 500

Order II. STOMAPODA.

Family *Squillidæ*.Genus *Gonodactylus* page 500

EDRIOPHTHALMA.

Order III. ISOPODA.

Family *Serolidæ*.Genus *Serolis* 501Family *Pycnogonidæ*.Genus *Nymphon* 501*Parts of Crustacea* 501

ENTOMOSTRACA.

Legion BRANCHIOPODA.

Order PHYLLOPODA.

Family *Apodidæ*.Genus *Apus* 502

Order CLADOCERA.

Family *Daphniadæ*.Genus *Daphnia* 502

Legion LOPHYROPODA.

Order OSTRACODA.

Family *Cypridæ*.Genus *Cypridina* 502*Cypris* 503*Candona* 503

Order XIPHOSURA.

Genus <i>Limulus</i>	page 503
--------------------------------	----------

Class III. CIRRIPIEDIA.

Family *Balanidæ*.

Genus <i>Balanus</i>	504
<i>Tetracrita</i>	505
<i>Chelonobia</i>	505
<i>Coronula</i>	505
<i>Tubicinella</i>	505
<i>Pyrgoma</i>	506

Family *Lepadidæ*.

Genus <i>Lepas</i>	506
<i>Pollicipes</i>	506
<i>Conchoderma</i>	507
<i>Oxynaspis</i>	507

Class IV. ANNELIDA.

Order I. ABRANCHIATA.

Genus <i>Hirudo</i>	508
<i>Nais</i>	508

Order II. DORSIBRANCHIATA.

Genus <i>Nereis</i>	509
<i>Polynoe</i>	509

Order III. TUBICOLÆ.

Genus <i>Amphitrite</i>	509
<i>Pectinaria</i>	509
<i>Sabellaria</i>	509
<i>Serpula</i>	509

Class V. MYRIAPODA.

Family I. CHILOPODA.

Genus *Scolopendra* page 510

Family II. CHILOGNATHA.

Genus *Iulus* 510

Class VI. ARACHNIDA.

Order TRACHEARIA.

Genus *Ixodes* 511

Acarus 511

Pycnogonum 511

Chelifer 511

Order PULMONARIA.

Genus *Scorpio* 511

Phrynus 512

Mygale 512

Insect Productions 513

C A T A L O G U E.

N A T U R A L H I S T O R Y.

PART I.

VEGETABLES IN THE DRY STATE.

Class I. THALLOGENS—ALGÆ.

THE *Algæ* by common consent are allowed to form the connecting link between animals and plants. Most of them are remarkable for the extreme simplicity of their structure, being principally composed of cells, and having neither true wood, spiral vessels nor stomata in any part of their composition. According to Lindley, “they are all cellular flowerless plants, nourished through their whole surface by the medium in which they vegetate; living in water or in very damp places; they are propagated by zoospores, coloured spores, or tetraspores.”

The *Algæ* are divided into five orders, viz. *Diatomaceæ*, *Confervaceæ*, *Fucaceæ*, *Ceramiaceæ*, and *Characeæ*, all of which are represented in this division of the Collection.

Order I. DIATOMACEÆ.

Crystalline, angular, fragmentary bodies, brittle, and multiplying by spontaneous separation.

Suborder I. CYMBELLÆ.

Individuals quite free, angular, siliceous.

Genus MERIDION, Agardh.

No.

1. A series of frustules of a minute Diatom, *Meridion circulare*, Ag.

Hab. Mountain brooks, West Point, New York.

According to Prof. J. W. Bailey, this species occurs in the greatest abundance in the mountain brooks around West Point, the bottoms of which are literally covered in the first warm days of spring with a ferruginous-coloured mucous matter, about one quarter of an inch thick, which, on examination with the microscope, proves to be filled with millions and millions of these exquisitely beautiful siliceous bodies. Every submerged stone, twig and spear of grass is enveloped by them, and the waving plume-like appearance of a filamentous body covered in this way is often very elegant.

Presented by John Quekett.

Genus ISTHMIA, Ag.

2. A portion of Sea-weed, upon which are a number of frustules of *Isthmia obliquata*, Ag.

Hab. South coast of England. *Presented by Edward Buckland, Esq.*

Genus ARACHNOIDISCUS, Bailey.

3. A portion of Sea-weed from South Africa, upon which may be observed a series of disc-shaped Diatoms known as *Arachnoidiscus Ehrenbergii*, Bail., *A. Japonicus*, Prit.

Hab. European and Indian Seas. *Presented by R. T. Frere, Esq., M.D.*

Genus ACTINOCYCLUS, Ehr.

4. A portion of Sea-weed, upon which are several specimens of a species of *Actinocyclus* allied to *A. undulatus* of Kützing.

Hab. Cape of Good Hope. *Presented by John Quekett.*

Suborder II. DESMIDIEÆ.

Individuals cylindrical: all natives of still waters and oozy places in the northern parts of the world.

Genus XANTHIDIUM, Ehr.

5. A portion of mud from the Thames, in which are several specimens of a species of *Xanthidium*.

Hab. Thames at Greenhithe.

Presented by Mr. J. T. Norman.

Genus CLOSTERIUM, Nitzsch.

6. A series of frustules of a Closterium, *Closterium Ralfsii*, Bréb.

Hab. Oozy places, Dolgelly, North Wales. *Presented by John Quekett.*

Order II. CONFERVACEÆ.

Vesicular, filamentary or membranous bodies, multiplied by zoospores generated in the interior, at the expense of their green matter.

Suborder I. PALMELLEÆ.

Cells somewhat globose or elliptical, free and more or less distinct, or collected by means of a slimy layer into a frond.

Genus PROTOCOCCUS, Ag.

7. A portion of limestone from a cliff in the neighbourhood of Cape Martyr, Cornwallis Island, in the Arctic regions, upon which are numerous vesicles of Red Snow, *Protococcus nivalis*.

Hab. Arctic and Alpine regions.

Presented by John Quekett.

Suborder II. CONFERVEÆ.

Cellules resembling joints, arranged in a net, or more frequently in simple or branched threads separate or combined by common slime.

Genus HYDRODICTYON, Roth.

8. A portion of the Water Net, *Hydrodictyon utriculatum*.

Fig. Kützing, Tab. Phycol. Abbild. der Tange, Band v. tab. 35. Lindley, Veg. Kingdom, p. 16.

Hab. The River Parret, Langport, Somerset.

This specimen, when perfect, was double like a net, nearly two feet in length, and of a bright green colour. *Presented by John Quekett.*

Genus ACHLYA, Nees.

9. A Stickleback, *Gasterosteus trachurus*, Cuv., having the greater part of its skin covered with a confervoid growth, *Achlya prolifera*, Nees.

Fig. Goodsir, Ann. of Nat. Hist. vol. ix. p. 336.

Other specimens of this plant will be found in the Pathological Series, Preparations 2305, 2305 A, the first of these having been placed by Mr. Hunter amongst diseases of the skin.

Genus CONFERVA, Fries.

10. A mass of *Conferva rivularis*, which has grown so thickly that it has assumed the appearance of Flannel. When first noticed, now some years since, it was supposed to be made up almost entirely of Infusoria, and hence the names of Meteor Paper and Infusorial Flannel were given to it by Ehrenberg and other authorities. On examination by the microscope its principal component is found to be a long-jointed Conferva; but numerous Diatomaceæ and Desmidiæ are attached to it, which give greater solidity to the mass.

Hab. The River Trent.

Presented by Reginald Mantell, Esq.

11. A portion of paper made of a Conferva, probably of the same species, viz. *Conferva rivularis*.

This Conferva was obtained from Duddingston Loch near Edinburgh, and the paper made by Sir Alexander Dick.

Presented by Sir E. Home, Bart.

12. A portion of a minute jointed Conferva, *Conferva flocculosa*, Dillw.

Fig. Dillw. Conferv. p. 52. pl. 28.

Hab. Pools, ditches and slow streams, adhering to other Confervæ.

Presented by John Quekett.

Suborder III. SIPHONÆ.

Frond either monosiphonous, that is, consisting of a single cell, usually branched in various ways, with the branches continuous or jointed, distinct or variously united; or pleiosiphonous, consisting of many tubular cells, placed in contact, branched, and variously united or held together by means of intercellular matter. Marine plants usually covered with calcareous incrustations.

Genus ACETABULARIA, Lamour.

13. A valve of the common Cockle with a series of fronds of *Acetabularia crenulata*, Lamour.

Fig. Lamouroux, Expos. Méthod. p. 20. t. 69. fig. 1.

Hab. Locality unrecorded.

Presented by Mr. J. T. Norman.

Order III. FUCACEÆ.

Cellular or tubular unsymmetrical bodies, multiplied by simple spores formed externally.

Suborder I. DASYCLADIDÆ.

Frond monosiphonous, continuous, or jointed, with verticillate branches, which are fastigiate, jointed, and have the last joint transformed into a vesicle.

Genus NEOMERIS, Lamour.

14. A group of the *Neomeris dumetosa*, Lamour.

Fig. Lamouroux, Expos. Méthod. p. 19. tab. 68. f. 10, 11.

Hab. Island of Sechelles.

Presented by Joseph Gratton, Esq.

Suborder II. BATRACHOSPERMIDÆ.

Frond polysiphonous, composed of a primary thread surrounded by parallel accessory ones. Vesicles terminal or lateral, clustered.

Genus *BATRACHOSPERMUM*, Roth.

15. A small freshwater *Fucus*, *Batrachospermum moniliforme*, Decaisne.
Hab. West Point, New York. *Presented by Prof. J. W. Bailey.*
16. A small freshwater *Fucus*, *Batrachospermum pulcherrimum*, Harvey.
Hab. Hill-side near Bristol. *Presented by G. H. K. Thwaites, Esq.*

Suborder III. *DICTYOTIDÆ*.

Frond continuous, membranous. Vesicles supported by flocks; collected in heaps, or scattered over the upper surface of the frond.

Genus *PADINA*, Adans.

17. The Peacock-tailed Sea-weed, *Padina Pavonia*, Lamour., *Zonaria Pavonia*, Ag.
Fig. Pallas, Zooph. p. 419. Ellis, Corall. p. 103. Harvey, Phyc. Brit. pl. 91.
Hab. South coast of England. *Presented by John Quekett.*
18. The Peacock-tailed Sea-weed, *Padina Pavonia*, Lamour.
 This specimen was formerly the property of Mr. Ellis, and the label beneath it is in the handwriting of that gentleman and of Dr. Solander.
Hunterian.

Suborder IV. *FUCIDÆ*.

Frond polysiphonous, often bladdery. Vesicles seated in hollow conceptacles formed of a folding-in of the frond, pierced by a pore, and surrounded by flocks; conceptacles scattered or collected upon a receptacle.

Genus *FUCUS*, Linn.

19. The common Sea Wrack, *Fucus vesiculosus*, Linn.
Fig. Harvey, Brit. Marine Algæ, p. 18.
Hab. Rocky shores, most abundant. *Presented by John Quekett.*

20. The Knobbed Wrack, *Fucus nodosus*, Linn.

Fig. Harvey, Brit. Marine Algæ, p. 19.

Hab. Sea-shores, very common.

21. A broad-leaved Sea-weed, *Fucus serratus*, Linn.

Fig. Harvey, Brit. Marine Algæ, p. 19.

Hab. Rocky sea-shores, very common.

Presented by James Murie, Esq., M.D.

Suborder V. CYTOSSEIRIDÆ.

Conceptacles or receptacles distinct from the frond.

Genus SARGASSUM, Rumph.

22. The Gulf-weed, *Sargassum bacciferum*, Ag.

Fig. Harvey, Phyc. Brit. pl. 109.

Hab. Tropical seas. Occasionally cast on the British coasts.

Presented by John Quekett.

Order IV. CERAMIACEÆ.

“Cellular or tubular unsymmetrical bodies, multiplied by tetraspores.”

Suborder I. CERAMIEÆ.

Frond tubular, jointed. Favellæ containing a loose mass of semi-transparent granules in a gelatinous envelope. Tetraspores external.

Genus CERAMIUM, Adams.

23. A very delicate Sea-weed, *Ceramium echionotum*, Ag.

Fig. Harvey, Brit. Marine Algæ, p. 165.

Hab. South coast of England.

Presented by T. H. Stewart, Esq.

Genus PTILOTA, Ag.

24. A bright red Sea-weed, *Ptilota plumosa*, Ag., *Ceramium plumosum*, Roth.

Fig. Harvey, Brit. Marine Algæ, p. 159.

Hab. From Puffleet near Saltram, Devon.

Presented by T. H. Stewart, Esq.

25. A small dark red Sea-weed, *Ptilota sericea*, Gmel.

Fig. Harvey, Brit. Marine Algæ, p. 160.

Hab. South coast of England.

Presented by John Quekett.

Genus *CHONDRUS*, Grev.

26. A small thick Sea-weed, *Chondrus Norvegicus*, Gunn.

Fig. Harvey, Brit. Marine Algæ, p. 142.

Hab. North Sea.

Presented by T. H. Stewart, Esq.

27. The Sea-weed known as Carrageen or Irish Moss, *Chondrus crispus*, Linn.

Fig. Harvey, Brit. Marine Algæ, p. 141.

Hab. The coasts of Ireland.

Presented by T. H. Stewart, Esq.

Genus *GIGARTINA*, Lamour.

28. A Sea-weed known as the Ceylon Moss, *Gigartina lichenoides*, Tourn. sp.

Sphærococcus lichenoides, Spreng.

Fig. Sprengel, Syst. Veg. ed. 16. p. 338.

Hab. Ceylon. Penang.

Presented by John Morris, F.G.S.

Genus *HALYMENIA*, Ag.

29. A specimen of a bright red Sea-weed, *Halymenia ligulata*, Woodw.

Fig. Harvey, Phyc. Brit. pl. 112.

Hab. Common on the south shores of Britain.

Presented by John Quekett.

Suborder II. *DELESSERIEÆ*.

Frond cellular. Tetraspores in definite heaps, or collected in sporophylls.

Genus *PLOCAMIMUM*, Grev.

30. A bright red Sea-weed, *Plocamium coccineum*, Grev., *Conferva coccinea*, Dillw.

Fig. Dillw. Conf. p. 80. pl. 36. Harvey, Brit. Marine Algæ, p. 119.

Hab. Common on all parts of the British coast.

Presented by John Quekett.

31. A specimen of *Plocamium coccineum*, Grev., exhibiting its capsular fruit.
Presented by John Quekett.
32. A specimen of *Plocamium coccineum*, Grev., which has lost nearly the whole of its red colour.
Presented by John Quekett.

Genus POLYIDES, Ag.

33. A small specimen of *Polyides rotundus*, Gmel.
Fig. Harvey, Brit. Marine Algæ, p. 146.
Hab. Southern and eastern shores of England and Ireland.
Presented by John Quekett.
34. A small specimen of *Delesseria*, *Delesseria alata*, Lamour., *Fucus alatus*, Linn.
Fig. Harvey, Brit. Marine Algæ, p. 114.
Hab. British coast.
Presented by John Quekett.

Genus DELESSERIA, Lamour.

35. A well-marked specimen of *Delesseria sinuosa*.
Fig. Harvey, Brit. Marine Algæ, p. 114.
Hab. Plymouth.
Presented by T. H. Stewart, Esq.
36. A well-marked specimen of *Delesseria sanguinea*.
Fig. Harvey, Brit. Marine Algæ, p. 114.
Hab. South coast of England, Plymouth.
Presented by T. H. Stewart, Esq.

Suborder III. RHODOMELEÆ.

Frond jointed. Tetraspores enclosed in transformed branches or stichidia.

Genus POLYSIPHONIA, Grev.

37. A small branched Sea-weed, *Polysiphonia atro-rubescens*, Harvey.
Fig. Harvey, Brit. Marine Algæ, p. 91.
Hab. South coast of England.
Presented by T. H. Stewart, Esq.

Genus CORALLINA, Linn.

38. The common Coralline, *Corallina officinalis*, Linn., *Corallina anglica*, Ger. Herb. 1572. Parkin. 1298.
Fig. Ellis, Corall. p. 48. pl. 24. Johnston, Sponges and Lithophytes, p. 216.
Hab. On every part of the British coast.
 This species of Coralline was formerly supposed to possess very powerful vermifuge properties. "Corallinae crassiusculae contritae pulvis in vino, lacte aut cassia exhibitus, pueris ad drachmam dimidiam, adultioribus ad drachmam unam interaneorum vermes enecat et expellit."—*Ray*.
 The specimen was of a light purple or claret colour when growing, but only traces of it now remain. *Presented by John Quekett.*
39. The common Coralline, *Corallina officinalis*, Linn.
Fig. Harvey, Brit. Marine Algæ, p. 106.
 A large mass, from which all trace of pink colour has disappeared, it having remained for a long time exposed on the sea-beach.
Presented by John Quekett.
40. A specimen of *Corallina officinalis*, which has been deprived of its coating of lime by maceration in dilute hydrochloric acid; it is quite soft and flexible, and under a microscope its spore-case (ceramidium), with its tetraspores *in situ*, may be observed. *Presented by John Quekett.*
41. A series of small specimens of *Corallina*, all of which, from the label in the handwriting of Mr. Ellis, would appear to have been included under the head of *C. officinalis*, Linn. *Hunterian.*
42. A small delicate Coralline, *Corallina elongata*, Ellis.
Fig. Ellis and Solander, Nat. Hist. of Corallines, p. 49. pl. 24. fig. 3.
Hab. Coast of Cornwall.
 The label is in the handwriting of Mr. Ellis. *Hunterian.*
43. The Cylindrical Coralline, *Corallina cylindrica*, Ellis.
Fig. Ellis and Solander, Nat. Hist. of Zoophytes, p. 115. pl. 22. f. 4.
Hab. West Indies.
 The label is in the handwriting of Mr. Ellis. *Hunterian.*

44. The Barbary Coralline, *Corallina granifera*, Ellis.
Fig. Ellis and Solander, Nat. Hist. of Zoophytes, pl. 21. fig. c. C. p. 121.
Hab. Mediterranean Sea.
 The label beneath the specimen is in the handwriting of Mr. Ellis.
Hunterian.
45. The Barbary Coralline, *Corallina granifera*, Ellis.
Hab. West Indies.
 This specimen is of a light pink colour. *Presented by John Quekett.*
46. The Seed-bearing Coralline, *Corallina muscosa*, Ellis.
Fig. Ellis, Nat. Hist. of Corallines, pl. xxiv. fig. g. G. p. 51.
Hab. South coast of England. *Hunterian.*
47. The Palmated Coralline, *Corallina palmata*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, pl. 21. fig. A. p. 119.
Hab. American Seas. *Presented by John Quekett.*
48. The Loricated Coralline, *Corallina loricata*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, p. 119.
Hab. Mediterranean Sea. *Hunterian.*

Genus JANIA, Lamour.

49. A group of feather-like Coralline, *Jania rosea*, Harvey.
Fig. Harvey, Nereis Australis, tab. 40.
Hab. Australian Seas. *Purchased.*

Genus AMPHIROA, Lamour.

50. The *Amphiroa cultrata*, Harvey.
Fig. Harvey, Nereis Australis, tab. 39.
Hab. Australian Seas.
 The broad Coralline at the base of this specimen is a fragment of *Amphiroa anceps*, Lamour. *Presented by Mr. S. W. Leonard.*

51. The *Amphiroa anceps*, Harvey.
Fig. Harvey, Nereis Australis, tab. 37.
Hab. Australian Seas. *Purchased.*
52. The *Amphiroa palmata*, Lamour., *Corallina palmata*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, t. 21. fig. A. p. 119.
Hab. American Seas. *Hunterian.*
53. The *Amphiroa fragilissima*, Lamour., *Corallina fragilissima*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, pl. 21. fig. d. p. 124.
Hab. Mediterranean and India Seas.
Presented by Captain Sir E. Home, Bart., R.N.
54. The *Amphiroa fragilissima*, Lamour.
 A large well-marked specimen.
Presented by Captain Sir E. Home, Bart., R.N.
55. The *Amphiroa tribulus*, Lamour., *Corallina tribulus*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, tab. 21. fig. e. p. 125.
Hab. Australian Seas.
Presented by Captain Sir E. Home, Bart., R.N.
56. The *Amphiroa charoides*, Harvey.
Fig. Harvey, Nereis Australis, pl. 30.
Hab. From Eagle-Hawk Neck, Port Arthur, Van Diemen's Land.
Presented by Captain Sir E. Home, Bart., R.N.
- Genus HALIMEDA, Lamour.
57. A series of specimens of the Indian Fig Coralline, *Halimeda Opuntia*, Lamour., *Corallina Opuntia*, Linn.
Fig. Ellis, Nat. Hist. of Zoophytes, tab. 20. fig. b. p. 111.
Hab. Australian Seas.
Presented by Captain Sir E. Home, Bart., R.N.
58. A specimen of Coralline of a dark brown colour allied to *Halimeda tuna*, Ellis.
Fig. Ellis, Nat. Hist. of Zoophytes, tab. 20. fig. e.
Hab. Australian and Mediterranean Seas. *Hunterian.*

59. A large specimen of Coralline, *Halimeda tuna*, Ellis.

Hab. Australian Seas.

Presented by Captain Sir E. Home, Bart., R.N.

Suborder IV. NULLIPOREÆ.

Frond crustaceous or foliaceous, opaque, not articulated.

Genus MELOBESIA, Lamour.

60. A series of specimens of *Melobesia frustulata*, Lamour., attached to seaweed.

Fig. Harvey, Brit. Mar. Algæ, p. 109.

Hab. South coast of England.

Presented by Charles Stokes, Esq., F.R.S.

61. Four specimens of *Melobesia* (*Nullipora*) *agariciformis*, Pall.

Fig. Johnston, Brit. Sponges and Lithophytes, p. 241.

Hab. Coasts of Britain.

Purchased.

62. A large irregularly lobed variety of *Melobesia agariciformis*, Pall.

Hab. Coasts of Britain.

Purchased.

63. An orbicular specimen of *Melobesia agariciformis*.

Fig. Johnston, Brit. Sponges, p. 232. Harvey, Phycologia Britannica, pl. 73.

Hab. Coasts of Britain.

Presented by Mr. W. H. Darker.

64. A group of *Melobesia* (*Nullipora*) *polymorpha*, Linn.

Fig. Johnston, Brit. Sponges and Lithophytes, p. 238.

Hab. Coast of Cornwall.

Presented by John Quekett.

65. A series of *Melobesia polymorpha*, Linn.

Fig. Johnston, Brit. Sponges and Lithophytes, p. 238.

Hab. Coasts of Britain. These specimens are from Eagle-Hawk Neck, Tasmania.

Presented by Captain Sir E. Home, Bart., R.N.

66. *Melobesia (Nullipora) calcarea*, Ellis.
Fig. Harvey, Nereis Australis, part ii. p. 110 (1849).
Hab. Eagle-Hawk Neck, Port Arthur, Van Diemen's Land.
Presented by Captain Sir E. Home, Bart., R.N.
67. Two specimens of *Melobesia (Nullipora) Darwinii*, Harvey.
Fig. Harvey, Nereis Australis, part ii. p. 109 (1849).
Hab. Eagle-Hawk Neck, Port Arthur, Van Diemen's Land.
Presented by Captain Sir E. Home, Bart., R.N.
68. *Melobesia (Nullipora) Brassica-florida*, Harvey.
Fig. Harvey, Nereis Australis, part ii. p. 110.
Hab. The Australian Seas. *Presented by Mrs. Fairless.*
69. A species of *Melobesia*.
Fig. MS. in Mus. Coll. of Surgeons.
Hab. Australian Seas. *Presented by Mrs. Fairless.*
70. A small rounded mass of *Melobesia (Nullipora) mamillaris*, Harvey.
Fig. Harvey, Nereis Australis, part ii. p. 109. pl. 41.
Hab. The sand in Sandy Island, at the head of Blind Bay, New Zealand.
Presented by Captain Sir E. Home, Bart., R.N.
71. A nodular mass of *Melobesia mamillaris* (Harvey), in which the mamillary prominences are larger than in the preceding specimen.
Presented by Captain Sir E. Home, Bart., R.N.
72. Pebbles taken from the sand of the sea-shore which are almost entirely coated with *Melobesia mamillaris*.
Presented by Captain Sir E. Home, Bart., R.N.
73. A mass of *Melobesia mamillaris* coating a pebble.
This specimen was formerly placed amongst the Hunterian Mulberry Calculi; but on being sawn through, the pebble was discovered: chemical analysis subsequently proved its true nature. *Hunterian.*

74. A species of *Melobesia* (*Nullipora*) investing a branched specimen of *Millepora truncata*.

Hab. Southern Seas. *Presented by Captain Sir E. Home, Bart., R.N.*

75. A specimen of *Melobesia* investing a Coral, of the genus *Oculina*, probably *O. ramea*.

The fractured portions exhibit the Coral surrounded with a thick layer of the Nullipore, but on the free extremities may be noticed numerous projections with openings in the centre of each, and which correspond with the polype-cells of the Coral ; so that in all probability some portions of the Coral were living whilst the Nullipore was incrusting it.

Hab. Eagle-Hawk Neck, Port Arthur, Van Diemen's Land.

Presented by Captain Sir E. Home, Bart., R.N.

Order V. CHARACEÆ.

The Charas are aquatic plants inhabiting fresh, and sometimes salt water. The stems are branched, and surrounded by regular whorls of smaller branchlets. The stems consist of parallel tubes, which are transparent and single, as in *Nitella*, or compound and incrustated with carbonate of lime, as in *Chara*. The organs of reproduction are of two kinds, and seated within the axillæ of the branchlets. The nucule or anther is oval, sessile, and spirally striated.

The fossilized nucules of *Chara* have been described as *Gyrogonites*, and were formerly considered to be Foraminifera¹.

Genus NITELLA, Ag.

76. The *Nitella* (*Chara*) *translucens*, Ag.

Fig. Lindl. Veg. Kingd. p. 28. edit. 1853.

Hab. Totteridge, Middlesex.

Presented by John Quekett.

¹ Specimens of *Gyrogonites* may be seen amongst the fossil plants, Nos. 231 and 232.

Genus CHARA, Linn.

77. The *Chara vulgaris*, Linn.*Fig.* Lindl. Veg. Kingd. p. 26 (1853).*Hab.* Nottingham; Plaistow Marshes.*Presented by John Quekett.*78. The *Chara aspera*, Willd.*Fig.* Hooker, English Flora, p. 246 (1833).*Hab.* North of England and Scotland.*Presented by John Quekett.*79. The *Chara hispida*, Linn.*Fig.* Lindl. Veg. Kingd. p. 26 (1853).*Hab.* Cambridge.*Presented by John Quekett.*80. Portions of the stem and branches of a species of *Chara*, incrustated with a very fine coating or replacement of vegetable tissue by granular calcareous matter, occasionally arranged in some of the fragments in a spiral manner. On section, the series of parallel tubes surrounding the hollow axis are seen to be still open.*Presented by Mrs. Buckland.*81. A mass of calcareous material formed by the stem and branches of *Chara hispida*, many of the filaments of which still retain their tubular character; their diameter, however, is increased by the thick coating of carbonate of lime.*Hab.* Cambridge.*Presented by Charles Brooke, Esq., F.R.S.*82. Another mass of a similar character, in which the calcareous substance is seen to be deposited on a species of *Chara* of larger size than the former, and in which the whorls are more distinct.*Hab.* Italy.*Purchased*

Order VI. FUNGI.

The Fungi are flowerless plants, of irregular growth, succulent texture, and simple or compound, cellular or filamentous structure. They chiefly grow on decayed animal or vegetable substances, or on decomposed organic matter,

and derive their peculiar nourishment from the juices of the substances to which they are attached, and not from the medium in which they are generated, thus differing in their mode of growth from the Algæ and Lichens. Fructification by spores, either externally attached or enclosed in sacs, and termed sporidia.

The genera of the Fungi are very numerous and widely distributed over the globe; some species being cosmopolite, whilst others are considered to be peculiar to certain districts. Various forms of Fungi are used in medicine, as some species of *Sphæria*, *Lysurus*, *Secale*, &c., whilst others are esteemed as articles of food, as the Mushroom, Morel, and Truffle. Although minute, yet they are powerful physical agents in effecting the destruction even of some of the larger members of the Vegetable Kingdom, as shown in the Preparations Nos. 87—93. Some of them infest the human species and lower animals, giving rise to various forms of skin- and other diseases. For convenience they are here classified according to their complexity and habitat, whether growing upon animals or vegetables. This classification accords, therefore, but partially with that adopted by many of our Botanical authorities.

Fungi affecting the Grasses.

Genus UREDO, Pers.

83. An ear of Barley attacked by a Fungus, *Uredo segetum*, forming the disease known as *Smut*. It appears as a brown or black sooty powder, which consists of the spores of the Fungus, so minute, that, according to Mr. Bauer's calculations, about fifty of them would cover but the sixty-thousandth part of a square inch. *Presented by John Quekett.*

84. An ear of Wheat, many of the grains of which are filled with a Fungus, *Uredo fætida*, forming the disease known as *Bunt*.

When the infected grains are broken, they will be found filled with a black fetid powder, which the microscope shows to be made up of a series of minute rounded spores. *Presented by John Quekett.*

Genus PUCCINIA, Pers.

85. Portions of Straw affected with Mildew, *Puccinia graminis*, Pers.

When examined with the microscope, the black matter is found to be composed of a series of pear-shaped *spores* filled with minute granules termed sporules.

Presented by Edward Stanley, F.R.S.

Genus OIDIUM, Lk.

86. The Spurred Rye or Ergot, *Secale cornutum*. Bald.

Fig. Quekett, Trans. Linn. Soc. vol. xviii. Pereira, Mat. Med. vol. ii. part 1 (1850). Lindl. Veg. Kingd. p. 39.

This Spur or Ergot, which is found on the Rye, sprouts forth from the grain as long dark-coloured horns, and is the production of a Fungus termed *Oidium abortefaciens*, Quekett. It also attacks other grasses, as the *Lolium perenne*, the *Festuca pratensis*, &c.

Rye thus affected with the Ergot, when used as food, often produces a dry gangrene of the extremities; but the Ergot itself is a useful medicinal agent, from its stimulating effects on the uterus.

Purchased.

Fungi affecting Woods.

Genus PEZIZA, Dill.

87. A piece of Beech-wood with the Verdigris Fungus, *Peziza æruginosa*, Pers.

Fig. Grev. Crypt. Flor. tab. 241.

Hab. On rotten branches.

Presented by F. Leyborne Popham, Esq.

88. Another specimen of *Peziza æruginosa*, Pers., inhabiting the Oak-tree.

Presented by W. J. Bernhard Smith, Esq.

89. A portion of a Cherry-tree affected with the mycelium of a Fungus.

Presented by Messrs. C. and H. Blake.

90. Part of a ship's plank—Teak-wood—which is traversed in every direction by the mycelium of a Fungus.

Presented by C. F. White, Esq.

91. A portion of the trunk of a Cedar of Lebanon affected with the mycelium of a Fungus, forming one of the kinds of *Dry Rot*.

The tree from which this specimen was taken, was one of two known as "The Brothers"; they were planted by Sir Hans Sloane in the year 1683, in the Botanical Gardens now belonging to the Society of Apothecaries at Chelsea.

Fig. Quekett, Trans. Micros. Soc. vol. i. p. 72.

Presented by the Rev. C. Kingsley, LL.B.

92. A smaller portion of the same Cedar, in which the paper-like Fungus has traversed the wood in the direction of the medullary rays.

Presented by the Rev. C. Kingsley, LL.B.

93. The mycelium of a Fungus, probably *Merulius lacrymans*, Wulf, from the beam of a house in which most of the timbers were affected with *Dry Rot*.

Presented by J. S. Streeter, Esq., F.R.C.S.E.

Fungi growing chiefly on Trees.

GENUS POLYPORUS, Mich.

94. Amadou or German Tinder, *Polyporus igniarius*, Mich., *Boletus igniarius*, Linn.

Fig. Lindl. Veg. Kingd. p. 40. Berk. Brit. Fungi, p. 44.

Hab. On trees both in Europe and America.

This fungus attains a considerable size, and was formerly used largely as tinder for lighting pipes.

Presented by Mr. Jacob Vallentine.

95. A larger specimen of *Polyporus igniarius*, Mich. *Purchased.*

96. The Parti-coloured Polyporus, *Polyporus versicolor*, Linn.

Fig. Berk. Brit. Fungi, p. 141 (edit. 1836).

Hab. Trunks of trees, Britain. Common.

Presented by John Morris, Esq., F.G.S.

97. A larger specimen of the same Fungus, *Polyporus versicolor*, Linn.

Purchased.

98. A Fungus (*Polyporus*) of remarkable shape, the lower portion cylindrical and branched, the upper sporangial, expanded and hatchet-shaped.
Hab. Locality unknown. *Presented by W. J. Bernhard Smith, Esq.*
99. A large Fungus from the Birch-tree, *Polyporus betulinus*, Bull.
Fig. Berk. Brit. Fungi, p. 140.
Hab. On trunks of dead Birch-trees.
Presented by W. J. Bernhard Smith, Esq.
100. Portion of *Polyporus betulinus*, Linn., to show the dense wood-like structure this form of Fungus assumes; it is still, however, to a certain extent spongy.
Hab. Cannock Chase. *Presented by W. J. Bernhard Smith, Esq.*

Genus DÆDALEA, Pers.

101. A Lamellated Fungus, *Dædalea quercina*, Linn. sp., *Agaricus quercinus*, Sow.
Fig. Sowerby, Engl. Fungi, tab. 181.
Hab. Common on old Oak-posts. *Hunterian.*
102. The Pale Straight-gilled Dædalea, *Dædalea betulina*, Linn. sp., *Agaricus betulinus*, Sow.
Fig. Sowerby, Engl. Fungi, tab. 182.
Hab. Trunks of various trees.
Presented by W. J. Bernhard Smith, Esq.
103. A larger specimen of the same species of Fungus, *Dædalea betulina*, showing a broad base of attachment.
Presented by W. J. Bernhard Smith, Esq.
104. A species probably of *Dædalea*, the pileus of which is about four inches in diameter, and the gills composed of a series of hexagonal cells, like those of the nest of an Hymenopterous insect, but not more than $\frac{1}{12}$ th of an inch in diameter. When examined microscopically, both the pileus and gills exhibit the characteristic filamentous structure of this form of Fungus.
Hab. Unknown. *Hunterian.*

Genus HYPOXYLON, Sc.

105. The Zoned Sphæria, *Hypoxylon concentricum*, Sc., *Sphæria fraxinea*, Sow.

Fig. Sow. Engl. Fungi, tab. 160.

Hab. On trunks of dead or decaying trees.

Presented by W. J. Bernhard Smith, Esq.

Genus NIDULARIA, Bull.

106. The Bell-shaped Bird's-nest Peziza, *Nidularia campanulata*, With., *Peziza lentifera*, Linn. sp.

Fig. Sow. Engl. Fungi, vol. i. tab. 28.

Hab. On the ground and on sticks. Common.

Presented by W. J. Bernhard Smith, Esq.

Pseudo-Fungi or Galls produced by Insects.

107. A leaf of an Oak having on its under surface numerous pea-like Fungi termed "Oak-currants," formed by the puncture of an insect, *Cynips Quercus pedunculi*.

Fig. Lindl. Veg. Kingd. p. 31 (1853).

Hab. Common on the Oak throughout England.

Presented by John Quekett.

108. A portion of the leaf of an Oak covered with the Fungi termed "Silk-button Galls," said to be produced by an insect, *Diplolepis lenticularis*.

Fig. Lindl. Veg. Kingd. p. 32 (1853).

Hab. Common on the Oak in all parts of England.

Presented by John Quekett.

109. Galls occurring on the Oak, and produced by the puncture of an insect supposed to be a species of *Cynips*.

Fig. Illust. Lond. News, vol. i. 1857, p. 246.

Hab. Oaks in the neighbourhood of Taunton, Somerset.

These Galls have occurred within the last four or five years in the greatest abundance on the Oaks in various districts of the West of England.

Presented by Miss Wride.

110. A branch of an Oak upon which numerous Galls, like those of the preceding specimen, have been developed. In nearly every Gall the hole through which the insect made its escape may be observed.

Presented by Miss Wride.

111. The Gall known as the "Oak Apple," which is produced by the puncture of an insect termed *Cynips Quercus terminalis*.

Presented by Mr. W. G. Searson.

112. Galls? of peculiar shape which have lately been introduced into this country from China, where they are termed *Woo-pei-tsze*. They are remarkable for the large amount of astringent matter they contain, and are said to be produced by the puncture of a species of *Aphis*, but in the centre of each is a hard brown stone or kernel.

Fig. Pharm. Journ. vol. iii. p. 384. Pereira, Mat. Med. vol. ii. p. 1224.

Hab. A tree termed *Yen-foo-tsze* found in the neighbourhood of Canton.

Presented by John Quekett.

Fungi growing in Fluid.

113. A bottle of Moselle wine in which two kinds of Fungi are seen: the larger one, brown and arborescent, is a species of *Xylaria*, probably *X. hypoxylon*; the smaller, minutely fibrous, an *Aspergillus*. The wine had been in bottle for upwards of fifteen years, and when the cork was removed, all parts of it were found to be penetrated by a white mycelium.

Fig. Berk. in Gardener's Chronicle, Aug. 7th, 1858.

Presented by Robert Gausby, Esq.

Fungi affecting Animals.

Genus *ACHORION*, Remak.

114. A portion of crust removed from a skin-disease, *Porrigo favosa*; it is composed almost entirely of a Fungus, which has received the name of *Achorion Schænleinii*, Remak.

Fig. Robin, Hist. Nat. Veg. Parasit. pl. xiii. fig. 1.

Hab. Found also in *Tinea favosa* and *scutulata*.

Presented by James Murie, Esq., M.D.

Genus OIDIUM, Lk.

115. A portion of the white matter removed from the Tongue of a person labouring under Fever. It is almost wholly composed of a Fungus termed *Oidium albicans*, Robin.

Fig. Robin, Hist. Nat. Veg. Parasit. pl. i. fig. 3.

Hab. Mouth and pharynx in the disease termed *Muguet*.

Presented by John Quekett.

Genus SPHÆRIA, Linn.

116. A Fungus known as *Sphæria Sinensis*, Berk., growing from the body of the larva of a Moth (*Agrotis*).

Fig. Lindl. Veg. Kingd. p. 39. ed. 1853.

Hab. China.

Presented by Captain Sir E. Home, Bart., R.N.

117. A series of specimens of *Sphæria Sinensis*, Berk., tied up in a bundle with silk, as sold in the market of Canton. They are used medicinally in cases where the powers of the system have been reduced by over-exertion or sickness.

Presented by Captain Sir E. Home, Bart., R.N.

118. A Fungus known as *Sphæria Robertsii*, growing from the anterior part of the body of the larva of a Moth termed *Hepialus versicolor*.

Fig. Lindl. Veg. Kingd. p. 40. ed. 1853.

Hab. New Zealand.

Presented by Captain Sir E. Home, Bart., R.N.

119. A series of specimens of *Sphæria Robertsii*, some of the larvæ having two Fungi growing from them.

Presented by Captain Sir E. Home, Bart., R.N.

120. Specimens of the Larvæ from which the *Sphæria Robertsii* grew. They have been divided both longitudinally and transversely, and show the attachment of the Fungus, and that the body of each larva is completely filled with it.

Presented by Captain Sir E. Home, Bart., R.N.

121. A large Fungus, *Sphæria Gunnii*, Hooker, growing from the back of the neck of the larva of a Moth.
Fig. Hooker, Journ. of Bot. vol. vii. p. 557. t. 22.
Hab. Tasmania. *Presented by Edward Stanley, Esq., F.R.S.*
122. Specimens of *Sphæria Gunnii*, one of which has been divided vertically.
Presented by Edward Stanley, Esq., F.R.S.
123. The larva of a *Cicada*, from the cephalothorax of which several specimens of a *Sphæria* have grown.
Hab. Dominica.
This specimen was obtained in the island of Dominica, and the label bears the date of 1764. *Hunterian.*
124. A larva of an insect, probably a *Cicada*, from the anterior part of the body of which a species of *Sphæria* has grown.
Hab. Dominica, 1764. Found on a Coffee-tree. *Hunterian.*
125. Two specimens of larvæ, probably of a *Cicada*, each having two *Sphæriæ* growing from them.
Hab. Dominica, 1764. *Hunterian.*
126. Three specimens, probably of the same larvæ, having *Sphæriæ* growing from them.
Hab. Dominica, 1764. *Hunterian.*
127. Two larvæ, probably of an Hemipterous insect, each having a Fungus termed *Sphæria curta* growing from it. *Presented by Miss Cotton.*

Order VII. LICHENS.

The Lichens are cellular, flowerless plants, very much like Fungi in character, but differ in receiving their nourishment through their whole surface from the medium in which they vegetate, and not from the substance to which they are attached. Lichens are widely distributed over the whole globe; they spread over rocks or trees in dry places in the form of a lobed and foliaceous or hard and crustaceous substance termed a *thallus*, and are

“propagated by spores, usually enclosed in membranous tubes or asci, always having green gonidia in their thallus.” Their properties are various, some being used as food; others, such as the Iceland Moss (*Cetraria Islandica*), and the Liverwort (*Peltidea canina*), as medicine; whilst others yield peculiar bitter principles, namely Lichenine, Cetrarine, Varioline, &c.: from many again valuable dyes are procured; among those may be mentioned Litmus (*Rocella tinctoria*) and Cudbear (*Lecanora tartarea*).

Family 1. *Idiothalameæ*.

Shields closed at first, afterwards open; the nucleus gelatinous, made up of naked spores.

Genus OPEGRAPHA, Ach.

128. The Elegant Grooved Opegrapha, *Opegrapha elegans*, Sm.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 146.

Hab. Smooth bark of trees; Berks, Sussex.

Purchased.

129. The Black Opegrapha, *Opegrapha atra*, Pers.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 145.

Hab. Smooth bark of trees.

Purchased.

Family 2. *Hymenothalameæ*.

Shields open; nucleus forming a disk, permanent and bearing asci.

Genus LECIDEA, Ach.

130. The Map Lichen, *Lecidea geographica*, Ach., *Lichen geographicus*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 178.

Hab. Britain. On rocks and stones in mountainous countries.

Presented by W. J. Bernhard Smith, Esq.

131. A larger specimen of *Lecidea geographica*, Ach.

Presented by W. J. Bernhard Smith, Esq.

Genus SCYPHOPHORUS, Fée.

132. The Common Cup Lichen, *Scyphophorus pyxidatus*, Fée, *Cladonia pyxidata*, Schær.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 238.

Hab. Heathy places on moors and in dry woods.

Presented by T. H. Stewart, Esq.

133. The Fingered Cup Lichen, *Scyphophorus digitatus*, Fée, *Cladonia digitata*, Schær.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 240.

Hab. In woods and barren heaths. *Presented by T. H. Stewart, Esq.*

Genus STEREOCAULON, Ach.

134. The *Stereocaulon paschale*, Ach., *Lichen paschalis*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 233.

Hab. Rocks and stones; abundant in mountainous countries.

Presented by T. H. Stewart, Esq.

Genus PARMELIA, Ach.

135. The Yellow Wall Parmelia, *Parmelia parietina*, Ach.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 204.

Hab. On trees and walls, abundant.

Purchased.

Genus LECANORA, Ach.

136. The Cudbear, *Lecanora tartarea*, Ach., *Lichen tartareus*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 191.

Hab. On rocks in alpine countries.

This specimen was formerly the property of Mr. Ellis, and was exhibited at one of the Meetings of the Society of Arts in 1755, as a valuable agent for dyeing purposes. *Hunterian.*

Genus STICTA, Ach.

137. The Lungwort Sticta, *Sticta pulmonaria*, Ach., *Lichen pulmonarius*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 206.

Hab. Trunks of trees in mountainous countries.

This specimen was also the property of Mr. Ellis, and was exhibited at a Meeting of the Society of Arts in 1755. The original label is preserved.

Hunterian.

Genus CETRARIA, Ach.

138. The Iceland Moss, *Cetraria Islandica*, Ach., *Lichen Islandica*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 221.

Hab. On mountains in the northern parts of Europe. *Purchased.*

Genus ROCCELLA, Ach.

139. The Rock Moss or Archill, *Roccella tinctoria*, DeCand., *Lichen Roccella*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 221.

Hab. Maritime rocks in the extreme south of England.

This specimen was formerly the property of Mr. Ellis, and was exhibited at the Society of Arts at one of its earliest Meetings in 1755.

Hunterian.

Genus USNEA, Hoffm.

140. The Flowery Usnea, *Usnea florida*, Ach.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 226.

Hab. Guernsey. Branches of old trees. *Purchased.*

141. The Jointed Usnea, *Usnea barbata*, Ach.

Fig. Hooker, Brit. Flora, vol. i. part v. p. 226.

Hab. On trees in old woods.

Presented by W. J. Bernhard Smith, Esq.

Genus ALECTORIA, Ach.

142. The *Alectoria jubata*, Ach., *Lichen jubata*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 227.

Hab. On trunks of trees and rocks. Abundant in subalpine countries.

Presented by T. H. Stewart, Esq.

143. The second metatarsal bone of the right side of the Foot of a Human subject, probably an Esquimaux, upon the distal extremity of which a Lichen has grown.

Hab. Refuge Bay, Arctic Regions.

Presented by Captain Sir E. Belcher, R.N.

Class II. ACROGENS.

The Acrogens are flowerless plants, the majority of the species having a distinct stem and leaves, the latter symmetrically arranged; the stem not usually increasing in diameter, but being an extension of one common vegetating point, and, according to Lindley, "a mere combination of the bases of leaves gradually evolved one from the bosom of the other:" hence the name of Acrogens applied to this Class. All the species have stomata or breathing-pores, and in the highly developed forms, true spiral vessels occur. As a general rule, the Acrogens are plants of small stature, but in Ferns they occasionally acquire the size of trees.

Order I. MUSCALES.

Cellular or vascular Acrogens, with the spore-cases either plunged in the substance of the frond, or enclosed in a cap-like hood.

Family 1. *Ricciaceæ*, Endl.

Spore-cases valveless, without operculum or elaters.

Genus RICCIA, Mich.

144. The Yellow Crystalwort, *Riccia glauca*, Michel.

Fig. Lindl. Veg. Kingd. p. 57.

Hab. Europe.

This plant is now largely cultivated in aquaria; it floats on the surface of the water, and grows very rapidly.

Family 2. *Marchantiaceæ*.

Spore-cases valveless, or bursting irregularly, without operculum, but with elaters.

These plants grow in damp places, and are composed principally of cellular tissue; but in addition to the spores, as in *Ricciaceæ*, there are spiral threads or elaters for their dispersion.

Genus MARCHANTIA, Mich.

145. The Polymorphous Marchantia, *Marchantia polymorpha*, Linn. sp.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 102.

Hab. Moist and wet situations. Common. *Presented by John Quekett.*

Family 3. *Jungermanniaceæ*.

Spore-cases opening by a definite number of equal valves, without operculum, but with elaters.

The *Jungermanniæ* are very similar in structure to the Mosses. They have either imbricated cellular leaves, surrounding a central axis, or the leaves and axis all fused into one common leafy expansion. This gradation upwards from a frond distinguishes them from the Lichens and Algæ.

They grow nearly everywhere, but luxuriate most in the moist shady woods of the tropics. Uses unknown.

Genus JUNGERMANNIA, Dill.

146. The Sweet-scented Moss, *Jungermannia asplenoides*, Linn.

Fig. Smith, Eng. Flora by Hooker, vol. v. p. 107.

Hab. St. Winifred's Well, Holywell, North Wales.

Presented by Mrs. C F White.

147. *Jungermannia Tamarisci*, Spreng.

Fig. Sprengel, Syst. Veg. ed. 16. p. 217.

Hab. Europe; Dresden.

Presented by Mr. J. T. Norman.

Family 4. *Equisetaceæ*, DeCand.

Spore-cases peltate, splitting on one side, without operculum, and with an elater to every spore.

The *Equisetaceæ* are slender leafless plants, with a striated fistular stem, having verticillate sheathed branches at the articulations. The stem consists chiefly of cellular substance, in the cuticle of which silex is largely deposited, and is so abundant in one species, *Equisetum hyemale*, or Dutch Rush, that it is used as a substitute for sand-paper.

Genus *EQUISETUM*, Linn.

148. The Great Water Horsetail, *Equisetum fluviatile*, Linn.

Fig. Hooker and Arnott, Brit. Flora, p. 581.

Hab. Sides of rivers and pools.

Presented by John Quekett.

149. The Rough Horsetail, Dutch Rush, *Equisetum hyemale*, Linn.

Fig. Hooker and Arnott, Brit. Flora, p. 583.

Hab. Boggy woods, Britain.

Purchased.

150. Portions of the stem of *Equisetum hyemale*, Linn., which have been boiled in nitric acid, and nothing but the siliceous skeleton now remains.

Purchased.

151. A portion of a white powdery substance, which is almost wholly composed of the spores of *Equisetum fluviatile*; each spore is surrounded by an elater, and when the mass is moistened by the breath, an active movement immediately takes place.

Purchased.

Family 5. *Bryaceæ*.

Spore-cases valveless, with an operculum without elaters.

The Urn Mosses are erect or creeping, terrestrial or aquatic cellular plants, having a distinct axis of growth destitute of a vascular system, and covered with minute, imbricated, entire, or serrated leaves. Reproductive organs of two kinds, viz. *antheridia* and *pistillidia*.

Genus WEISSIA, Hedw.

152. The Green-cushioned Weissia, *Weissia controversa*, Hedw.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 22.

Hab. On the margin of a torrent, North Wales.

Presented by William Valentine, Esq., F.L.S.

Genus FUNARIA, Schreb.

153. The Hygrometric Moss, *Funaria hygrometrica*, Hedw.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 52.

Hab. Old walls and buildings. *Presented by N. B. Ward, Esq., F.R.S.*

Genus POLYTRICHUM, Linn.

154. The Urn-bearing Moss, *Polytrichum urniferum*, Linn.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 50.

Hab. Sandy places on banks of streams.

Presented by N. B. Ward, Esq., F.R.S.

Genus DAWSONIA, R. Brown.

155. The Superb Moss, *Dawsonia superba*, R. Br.

Fig. Lindl. Veg. Kingd. p. 67.

Hab. New Zealand. *Presented by N. B. Ward, Esq., F.R.S.*

156. The *Dawsonia politrichioides*, R. Br.

Fig. Lindl. Veg. Kingd. p. 67.

Hab. New Zealand. *Presented by John Quekett.*

Genus NECKERA, Hedw.

157. The Crisped Neckera, *Neckera crispa*, Hedw.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 71.

Hab. Woods in Cheshire and Derbyshire.

Presented by William Valentine, Esq., F.L.S.

Genus HOOKERIA, Sm.

158. The Shining Hookeria, *Hookeria lucens*, Sm.

Fig. Hooker, Brit. Flora, vol. v. part i. p. 74.

Hab. Moist banks in woods. *Presented by John Quekett.*

Family 6. *Lycopodiaceæ*.

Lycopodal Acrogens with one- to three-celled axillary spore-cases, and the reproductive bodies all of the same nature.

Usually moss-like plants with creeping stems and imbricated leaves, the axis consisting of one solid cord of annular vessels, or of a reticulated column of such vessels intersected by cellular tissue ; or stemless plants with erect subulate leaves and a solid corn.

Genus *LYCOPODIUM*, Linn.

159. The Fir Club-Moss, *Lycopodium Selago*, Linn.

Fig. Smith, English Flora, tab. 233.

Hab. Heathy and stony soils in mountainous countries.

Presented by John Quekett.

160. A portion of the powdery substance contained in the spore-cases of *Lycopodium Selago* ; it is highly inflammable, and used both in pharmacy and in the manufacture of fireworks. *Purchased.*

161. A species of Lycopodium, *Lycopodium phlegmarioides*, R. Br.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

Family 7. *Marsileaceæ*.

Stemless plants, creeping or floating ; leaves usually stalked, sometimes sessile and scaly.

Genus *PILULARIA*, Linn.

162. The Creeping Pilwort, *Pilularia globulifera*, Linn.

Fig. Smith, English Flora, tab. 521.

Hab. Margins of lakes and other moist places. Britain.

Presented by John Quekett.

Genus *ISOETES*, Linn.

163. The European Quill-wort, *Isoetes lacustris*, Linn.

Fig. Smith, English Botany, tab. 1084.

Hab. Bottoms of lakes in the North of England, Wales and Scotland.

Presented by John Quekett.

Order II. FILICALES.

Vascular Acrogens with marginal or dorsal one-celled spore-cases, usually surrounded by an elastic ring, and spores of only one kind.

The Ferns are leafy plants, producing a rhizome which creeps below or upon the surface of the earth, or rises into the air like the trunk of a tree. This trunk consists of a woody cylinder of equal diameter at both ends, growing at the point only, and coated by a hard fibrous rind. The wood when present consists of large scalariform vessels imbedded in hard plates of thick elongated tissue generally assuming an interrupted sinuous appearance.

Family 1. *Ophioglossaceæ*, R. Brown.

Filical Acrogens, with ringless, distinct, 2-valved spore-cases, formed on the margin of a contracted leaf.

Genus *OPHIOGLOSSUM*, Linn.

164. The Common Adder's Tongue, *Ophioglossum vulgatum*, Linn.

Fig. Hooker and Arnott, Brit. Flora, p. 578.

Hab. Moist pastures, and in woods.

Presented by John Quekett.

Family 2. *Polypodiaceæ*, R. Brown.

Filical Acrogens, with ringed spore-cases growing on the back or edge of the leaves, distinct and splitting irregularly.

Genus *POLYPODIUM*, Linn.

165. The Common Polypody, *Polypodium vulgare*, Linn.

Fig. Hooker and Arnott, Brit. Flora, p. 566.

Hab. Rocks, walls, and trunks of trees.

Presented by John Quekett

166. The *Polypodium coriaceum*, Raddi.

Fig. Raddi, Plant. Brasil. Filices, 25. Roxburgh, Calcutta Journal, 1844.

Hab. Brazil and East Indies.

Hunterian.

Genus ASPLENIUM, Linn.

167. The Sea Spleenwort, *Asplenium marinum*, Linn.
Fig. Hooker and Arnott, Brit. Flora, p. 573.
Hab. Clefts and caves of rocks. Scotland. *Presented by John Quekett.*
168. The Green Spleenwort, *Asplenium viride*, Huds.
Fig. Hooker and Arnott, Brit. Flora, p. 573.
Hab. Moist rocks. North of England, Wales, and Scotland.
Presented by John Quekett.

Genus CETERACH, Willd.

169. The Common Ceterach, *Ceterach officinarum*, Willd.
Fig. Hooker and Arnott, Brit. Flora, p. 566.
Hab. Rocks and walls in the South of England. Common.
Presented by John Quekett.
170. A portion of the stem of a Tree Fern, which has had all its interior structure removed: the Chinese thus convert it into a vessel for holding paper matches.
Hab. China. *Presented by W. Lockhart, Esq.*

Genus DICKSONIA, Hérít.

171. Portion of the stem of a Tree Fern, *Dicksonia antarctica*, Hérít.
Fig. Lindl. Veg. Kingd. p. 74. fig. 52.
Hab. New Zealand. *Presented by G. E. Blenkins, Esq., F.R.C.S.E.*
172. Transverse section of the stem of the same Tree Fern, *Dicksonia antarctica*, Hérít.
Both in this and the preceding specimen the central cellular structure has been destroyed. *Presented by G. E. Blenkins, Esq., F.R.C.S.E.*
173. A transverse section of the stem of a Tree Fern, probably a species of *Dicksonia*, in which the central cellular structure has been preserved. The bundles of woody and vascular tissue on the exterior are surrounded with a large quantity of soft silky hairs of a rich golden colour.
Hab. Australia ; New Zealand. *Purchased.*
174. A vertical section of the stem of a Tree Fern, probably a species of *Dicksonia*, taken from near the apex of the trunk. It shows the mode in

which the woody and vascular tissues are disposed in the parts near to which the fronds are given off. *Presented by John Morris, Esq., F.G.S.*

175. A transverse section of the stem of a Tree Fern, probably a species of *Cyathea*. It is much harder than either of the preceding specimens, and is almost wholly composed of dense woody tissue, of a dark brown colour, which is arranged in a peculiar dentated manner.

Presented by Mr. John Jameson.

176. Silky filaments removed from the stem of a Tree Fern, probably a species of *Dicksonia*, which is occasionally employed as a styptic, and formerly used as a moxa. *Hunterian.*

177. The woolly stem of a Fern, *Aspidium Barometz*, which, from its fancied resemblance to an animal, has been termed the *Scythian* or *Tartarian Lamb*. The leaf-stalks have been cut off within three or four inches of the stem, and the stem itself is now turned upside down.

Fig. Lindl. Veg. Kingd. p. 76.

Hab. Plains of Tartary.

Presented by John Quekett.

Class III. RHIZOGENS.

The Rhizogens are parasitical plants destitute of true leaves, their stem being either an amorphous fungous mass or a ramified mycelium. They are furnished with true flowers having genuine stamens and carpels, and their colour is either brown-yellow or purple, but never green.

Order I. BALANOPHORACEÆ, Rich.

Family *Cynomoridæ*, Hooker.

Genus *CYNOMORIUM*, Michel.

178. The Maltese Fungus, *Cynomorium coccineum*, Michel, *Fungus Melitensis*, vet. auct.

Fig. Lindl. Veg. Kingd. p. 90.

Hab. The island of Gozo, near Malta.

Presented by G. E. Blenkins, Esq., F.R.C.S.E.

Class IV. ENDOGENS.—MONOCOTYLEDONS.

The Endogens are so named from the fact that new woody matter is constantly developed in the first instance towards the interior of the trunk, and curves outwards in its downward course. The stem is composed of cells and vessels which are arranged in a peculiar manner. The vascular bundles are scattered through the cellular tissue, and there is no distinction of pith, wood, bark, and medullary rays, as in those plants termed Exogens, and generally the leaves are straight-veined.

Although there are examples of Endogens in this country, such as our Lilies and Grasses, they are all of very small size, none having permanent aerial woody stems,—the large representatives of the class, such as the Palms, being confined to regions situated within the tropics.

Order I. GRAMINACEÆ, Lindl.

The Graminaceæ are evergreen herbs, occasionally having stems of considerable size, and living for many years. The stem is cylindrical, usually fistular, closed at the joints, and sometimes solid. The cuticle, and not unfrequently many of the woody fibres and vessels, abound in silex, as may be proved by the masses of vitrified matter found whenever a hay-stack or heap of corn is accidentally consumed by fire; and that the cuticle contains a large quantity may be known by its hardness. In the joints of the Bamboo a perfect siliceous deposit is occasionally secreted, where it forms the singular substance called *Tabasheer*¹.

Family 1. *Oryzeæ*, Endl.Genus *ORYZA*, Linn.

79. A portion of a panicle of the Common Rice, *Oryza sativa*, Linn.

Fig. Pereira, Mat. Med. vol. ii. pt. 1. p. 968.

Hab. Marshy lands in tropical countries. *Presented by John Quekett.*

¹ A specimen of this curious mineral is described in another part of the Catalogue.

Family 2. *Phalarideæ*, Lindl.Genus *ZEÆ*, Linn.

180. A head of Indian Corn, *Zea Mays*, Linn.

Fig. Pereira, Mat. Med. vol. ii. pt. 1. p. 971.

Hab. Indigenous in tropical America, but cultivated in various parts of the world.

Presented by John Quekett.

Family 3. *Arundineæ*, Lindl.Genus *ARUNDINARIA*, Rich.

181. A tube upwards of 8 feet in length, composed of a single internode of a Reed, *Arundinaria Schomburgkii*, Benn., termed *Curata* by the Indians.

Fig. Schomburgk, Linn. Trans. vol. xviii. p. 562.

Hab. Head waters of the Orinoco, South America.

These tubes are formed of the culm of a grass of the tribe of *Bambuseæ*, and the Indians of Esmeralda use them as blow-pipes, termed by them *Sarbacans*, through which they blow the arrows tipped with the deadly Urari or Woorali poison. The reed is protected by the slender trunk of a Palm, a species of *Kunthia*?, hollowed out for the purpose. *Purchased.*

182. A series of arrows, tipped with the Urari or Woorali poison, which are blown from the *Sarbacan* or blow-pipe above described. They are composed of thin slips of some species of Palm or Cane, and when used a portion of silky cotton is tied round the base of each.

Presented by T. M. Stone, Esq.

183. A small portion of *Urari* or *Woorali* poison. It is procured from the bark of *Strychnos toxifera*, Schomb., and formed a part of that used by Sir Benjamin Brodie, in his experiments on the Effects of Poisons in the year 1822.

Family 4. *Andropogoneæ*, Kunth.Genus *SACCHARUM*, Linn.

184. A transverse section of the stem of the Sugar Cane, *Saccharum officinarum*, Linn.

Fig. Lindl. Veg. Kingd. p. 114. Pereira, Mat. Med. vol. ii. part i. p. 1013.

Hab. East and West Indies. *Presented by John Quekett.*

185. A portion of the stem of the Sugar Cane, *Saccharum officinarum*, Linn., taken from near the base, and showing a space of about three inches between the joints. The saccharine matter is still present in this specimen.

Presented by John Quekett.

186. The inflorescence of a Sugar Cane, *Saccharum exaltatum*, Roxb.

Fig. Rheede, Hortus Mal. 12. 46.

Hab. Lower plains of Bengal.

This panicle was cut from a plant 12 feet high, and was formerly in the possession of the Botanical Society of London. *Purchased.*

Genus *BAMBUSA*, Schreb.

187. A portion of the stem of a Bamboo, *Bambusa arundinacea*, Roxb., about four feet in length, and two inches in diameter : joints occur at intervals of a foot.

Fig. Lindl. Veg. Kingd. p. 114.

Hab. Tropical countries. *Purchased.*

188. A transverse section of the stem of the same Bamboo, *Bambusa*, taken near a node : the thickness of the woody and vascular tissues is one-third of an inch, and the node presents a concave surface. *Purchased.*

189. A transverse section of the stem of a Bamboo, *Bambusa*, taken through the solid portion of the node. It has been polished, and the disposition of the fibro-vascular bundles, which are of a dark colour, is well shown.

Presented by John Quekett.

190. A series of specimens of Canes, belonging principally to the genus *Bambusa*, and largely employed in this country for walking-sticks, fishing-rods, and a variety of other useful purposes. They are here introduced to show the shiny layer forming their outer coating, which contains a large amount of silica. *Presented by H. H. Peppin, Esq.*
191. Two specimens of the stem of a Bamboo, *Bambusa*, which have been subjected for many hours to the intense heat of a coke oven. The silica entering into the formation of the fibres and vessels is preserved in filaments of a pearly white colour, but all the parts directly exposed to the action of the fire are coated with a layer of brilliant coke. *Presented by Mr. John Jameson.*
192. A filamentous mass of Silex, obtained from the burning of numerous stems of the Bamboo in the open air. When examined microscopically, the filaments are found to consist principally of the coating of woody fibres and vessels. *Presented by Mr. J. T. Norman.*

Order II. CYPERACEÆ, R. Brown.

Glumal Endogens with whole leaf-sheaths, a one-celled ovary, and an embryo enclosed within the base of the albumen.

Family *Cypereæ*.

Genus *PAPYRUS*, Willd.

193. Two specimens of the Bullrush of the Nile, *Papyrus antiquorum*, Willd.
Fig. Lindley, Veg. Kingd. p. 118.
Hab. Egypt ; Syria.

This plant is of the greatest utility in the countries in which it is found, and was largely employed by the ancient Egyptians in the manufacture of paper. *Purchased.*

Order III. PISTIACEÆ.

Floating or land-plants, with very cellular, lenticular or lobed fronds or leaves, some of them wholly destitute of spiral vessels, except in the pistil.

Genus LEMNA, Linn.

194. The Common Duckweed, *Lemna major*, Linn.

Fig. Lindley, Veg. Kingd. p. 124.

Hab. Stagnant pools. Common.

Presented by John Quekett.

Order IV. TYPHACEÆ, De Cand.

Herbaceous plants growing in marshes or ditches. Stems without nodes. Leaves rigid, ensiform with parallel veins.

Genus TYPHA, Linn.

195. The spadix of the Common Bullrush, *Typha latifolia*, Linn.

Fig. Lindl. Veg. Kingd. p. 126.

Hab. Ditches and marshes in the northern parts of the world.

Presented by Alfred J. S. Quekett.

Order V. PANDANACEÆ.

Trees or bushes sometimes sending down aerial roots, and their stems leaving a constant tendency to branch. Their leaves have a uniform spiral arrangement round the axis, so as to give the stems a corkscrew appearance: hence the term of *Screw-pines*.

Genus PANDANUS, Linn.

196. A transverse section of the stem of a small Screw-pine, *Pandanus odoratissimus*, Linn. Like many of the Endogens before described, the specimen is

made up of bundles of woody fibres and vessels compactly arranged near the circumference, but very loosely so in the centre: one portion of the section is harder than the rest, and of a reddish colour; this is due to the deposition of resinous matter in the interior of the cells.

Fig. Lindl. Veg. Kingd. p. 130.

Hab. Indian Archipelago. *Presented by J. M. Dempsey, Esq., M.D.*

Order VI. PALMACEÆ.

Trunk arborescent, simple, occasionally shrubby, sometimes branched, rough, with the dilated half-sheathing bases of the leaves or their scars; occasionally armed with stiff spines. Leaves clustered, terminal usually very large, pinnate or flabelliform, plaited, with parallel simple veins.

The Palms are amongst the most interesting members of the Vegetable Kingdom, and are of the greatest value to mankind, as they afford not only food and raiment, but a variety of other objects of the greatest economical importance.

Family 1. *Areceæ*, Lindl.

Genus *ARECA*, Linn.

197. A transverse section of the stem of the Betel Nut Palm, *Areca Catechu*; it shows the remarkable manner in which the woody fibres and vessels are arranged; they are few in number and widely separated in the centre of the section, but small and closely packed towards the margin. The radiating wavy black lines, nearly all of which are double, enclose between them portions of the wood in an early stage of decay.

Fig. Lindley, Veg. Kingd. p. 137.

Hab. Penang, East Indies. *Presented by the Hon. W. T. Lewis.*

198. The fruit of the Betel Nut Palm, *Areca Catechu*, largely used in some of the Eastern countries for its narcotic or intoxicating power. One of the specimens has been divided vertically to show the peculiar ruminated condition of the albumen.

Presented by John Quekett.

Family *Calameæ*.Genus *SAGUS*, Gærtn.

199. A specimen of the fruit of the Sago Palm, *Sagus Rumphii*, Gærtn.

Fig. Lindl. Veg. Kingd. p. 136.

Hab. Islands in the Indian Archipelago.

Presented by Sir Joseph Banks, Bart., F.R.S.

200. A fruit of the Sago Palm, *Sagus Rumphii*, divided vertically to show the hard kernel within.

Presented by Sir Joseph Banks, Bart., F.R.S.

Palms termed *Palmijunci* by Rumphius.

201. A small Palm termed a Ground Rattan, having an exterior coating of silica, which exhibits a series of annular markings, showing the attachment of leaves. A large portion of the root is preserved.

Fig. Lindl. Veg. Kingd. p. 138.

Hab. East Indies.

Purchased.

202. A transverse section of the root of a Palm, said to be that of a species of *Rattan*; at first sight it appears to resemble an Exogen in having annual layers and medullary rays, but when more carefully examined none of the layers are complete. All the brown parts are composed of cellular tissue, the other portions of thick walled woody fibres and vessels.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

203. A similar specimen of the root of a *Rattan Palm*, which is of oval figure, and only differs from the preceding section in having the bundles of woody fibres and vessels very much elongated in the direction of the long axis of the specimen.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

204. A transverse section of the root of another *Rattan Palm* ; it is upwards of five inches in diameter, and instead of exhibiting annular markings like those of the layers of growth, the bundles of woody fibres are disposed in a series of stellate masses, each surrounded with cellular tissue. In the centre, some of these masses are so loosely bound together that they can be easily detached from each other.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

Family *Borasseæ*.

Genus *BORASSUS*, Linn.

205. A portion of the trunk of a Palm, termed Palmyra Wood, *Borassus flabelliformis* ; the upper portion has been divided vertically, so that at one view may be seen the exterior of the trunk, and the disposition of the bundles of woody fibres in the transverse and vertical directions ; these bundles may be readily known by their black colour.

Fig. Lindl. Veg. Kingd. p. 138.

Hab. West Indies.

Purchased.

206. A transverse section of the entire trunk of the same Palm, *Borassus flabelliformis*, exhibiting the arrangement of the woody fibres and vessels, which are highly characteristic of the endogenous mode of growth. They are arranged in bundles at distances of about one-twelfth of an inch apart in the centre of the section, but towards the circumference they are so close as almost to touch each other.

Purchased.

207. A vertical section of the same Palm, *Borassus flabelliformis*, in which the disposition of the cellular tissue and the woody bundles may be well seen, the latter being of a rich brown or black colour, and in some instances wholly or partially surrounded with light coloured fibres. All the tissue between these bundles is that known as cellular. The upper part of the section may be distinguished from the lower by the curving outwards of the woody bundles in their course downwards.

Purchased.

Family *Phœnicidæ*.

Genus PHŒNIX, Linn.

208. A transverse section of the trunk of the Date Palm, *Phœnix dactylifera*, Linn. ; it is nearly twelve inches in diameter, and almost wholly composed of bundles of woody fibres, so loosely connected together with cellular tissue, as to be easily separable one from the other, especially those in the centre, which are much larger than those nearer the circumference.

Fig. Lindl. Veg. Kingd. p. 137.

Hab. North of Africa, South of Europe, Persia.

Presented by J. M. Dempsey, Esq., M.D.

Family *Cocoeæ*, Lindl.

Genus ELÄIS, Jacq.

209. The fruit of a Palm, *Eläis guineensis*, from which the Palm-oil of commerce is obtained. Each nut is of a beautiful orange colour, but when exposed to the light the colouring matter is quickly changed to a light brown or white.

Fig. Lindl. Veg. Kingd. p. 137.

Hab. West coast of Africa.

Presented by R. Warrington, Esq.

Genus Cocos, Linn.

210. A transverse section of part of the trunk of a large Cocoa Nut Palm, *Cocos nucifera*, Linn. It has been cut square, but by an examination of the arrangement of the bundles of woody fibres, the sides corresponding with the inner and outer portions of the trunk can at once be made out.

Fig. Lindl. Veg. Kingd. p. 136.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

211. A transverse section of part of the trunk of a Cocoa Nut Palm, *Cocos nucifera*, Linn., in which the bundles of woody fibres are larger and disposed in a more regular manner than those of the preceding specimen.

Presented by the Hon. W. T. Lewis.

212. A transverse section of part of the trunk of a Palm, said to be that of the Cocoa Nut, *Cocos nucifera*, Linn., in which the bundles of woody fibres are very much larger, and fully three times as numerous as those of the two preceding specimens. *Presented by John Quekett.*

213. The fruit of the Coquilla Nut, *Cocos lapidea*, Gärtner.
Fig. Gärtner, De Fructibus, vol. i. p. 16. t. 6. f. 1 ; Mart. Palm. p. 290.
Hab. Mexico. *Purchased.*

214. A specimen of the same fruit, *Cocos lapidea*, Gärtner., which has been divided vertically. It is exceedingly heavy, and upwards of half an inch in thickness, being made up of cells filled with dense sclerogenous matter. These nuts are largely employed by the turner for boxes, handles of walking-sticks, and of umbrellas, and for a variety of other useful purposes.

215. A specimen of the fruit of the Double Cocoa Nut, *Lodoicea Seychellarum*, Labillard. It is of dense black colour, and has been deprived of its outer fibrous husk.
Fig. Lindl. Veg. Kingd. p. 139 ; Mart. Palm. vol. iii. p. 221. t. 122.
Hab. Seychelles Islands. *Purchased.*

216. The fruit of the same species of Cocoa Nut, which has been divided vertically. It is of the same dense colour as the preceding, and was found floating on the sea.

These fruits were formerly supposed to be the production of some gigantic sea-weed, as they were always picked up floating on the ocean ; but the discovery of the true trees overhanging the water in the Seychelles Islands in recent times, has shown their true origin.

Presented by Sir Everard Home, Bart., F.R.S., 1809.

GENUS PHYTELEPHAS, Ruiz et Pav.

217. The fruit of a Palm called Tagua, *Phytelephas macrocarpa*, Ruiz et Pavon, the kernel of which forms the material known as *Vegetable Ivory*.
Fig. Lindl. Veg. Kingd. p. 138.
Hab. South America, Peru, Andes. *Purchased.*

218. The kernel of the fruit of *Phytelephas macrocarpa*, which has been divided vertically to show its ivory-like structure. *Purchased.*
219. The kernel of the fruit of *Phytelephas macrocarpa*, part of which has been turned in a lathe and polished: its resemblance to ivory is very strikingly exemplified. *Purchased.*

Genus SAGUERUS, Rumph.

220. A vertical section taken from the outside of the trunk of a Palm, *Saguerus saccharifer*, known as the Black Rope Tree. The bundles of woody fibres are so very numerous and so close together near the circumference, that the transverse section appears almost as a black mass, whilst on the exterior the black bundles or fibres are here and there mixed with white ones, so that the surface when polished appears as if it were made up of the small quills of a porcupine. The trunk of the Palm from which this section was removed, must have been upwards of a foot in diameter.

Fig. Rumph. vol. ii. p. 126.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

This is one of the Palms which yield the long black horse-hair-like filaments now so largely employed in the manufacture of brushes and brooms.

221. A smaller vertical section of the same *Palm*, which on its outer surface exhibits a series of scars, where a circle of leaf-stalks were attached: in these, as well as in the other portions of the surface, the black and white fibres are beautifully arranged.

Presented by the Hon. W. T. Lewis.

222. A transverse section of the trunk of the same *Palm*, which exhibits in a striking manner the mode of arrangement of the bundles of woody fibres, some of which are entirely black, others black on one side and white on the other, giving the section a mottled appearance.

Presented by the Hon. W. T. Lewis.

223. The stem of a Palm known as the "*Penang lawyer*." The root, which is of considerable size, has been partly preserved, and the arrangement of the bundles of woody fibres and vessels in each rootlet beautifully shown. The transverse section of the stem exhibits the disposition of the bundles of woody fibres, most of which are of very small size and of a black colour.

Fig. Lindl. Veg. Kingd. p. 138.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

These Palms are exceedingly abundant in the woods of Penang, and are largely employed in this country for walking-sticks and umbrellas, the expanded extremity or root forming an excellent handle.

224. A transverse section of the stem of the same Palm, in which the bundles of woody fibres are disposed in the usual endogenous manner: they are very numerous and remarkable for their small size, the majority of them not exceeding $\frac{1}{50}$ th of an inch in diameter.

Presented by the Hon. W. T. Lewis.

225. A transverse section of the entire trunk of a Palm, in which the bark also has been preserved. The bundles of woody fibres are of a bright yellow colour and large size, and near the margin are so close together that only one or two rows of cells occur between them. All the woody fibres are nearly full of secondary deposit, as in the hard tissue of seeds. In microscopic structure, a transverse section very much resembles that of a fossil Palm from Antigua.

Hab. West Indies.

Presented by J. Morris Bennett, Esq., M.R.C.S.E.

Order VII. AMARYLLIDACEÆ, Lindl.

Bulbous plants, sometimes fibrous rooted, occasionally with a tall, cylindrical, woody stem.

Family AGAVEÆ, Linn.

Genus AGAVE, Linn.

226. A portion of the flower-stem of an American Aloe, *Agave Americana*: it is

composed of a few scattered bundles of woody fibres enclosed in a large loose cellular tissue, which renders it exceedingly light. In some parts of the circumference the endogenous structure is very apparent.

Fig. Eng. Cyclop. vol. i. p. 92.

Hab. Tropical America.

Presented by John Quekett.

The stem, of which the above is a section, was nearly forty feet high, and its growth was most rapid, sometimes exceeding twelve inches in twenty-four hours.

227. A transverse section of the same flower-stem, of which both the upper and under surfaces have been made smooth, in order to show the mode of arrangement of the woody fibres, which near the circumference is like that of the Palms. The specimen is three inches and a half in diameter and one inch in thickness, whilst its weight does not exceed half an ounce. The central portion of the stem split longitudinally has been highly recommended as a razor-strop, in consequence of the minute particles of silica imbedded in its substance. *Presented by John Quekett.*

Order VIII. MUSACEÆ, Agardh.

Stemless, or nearly stemless plants, with leaves sheathing at the base and forming a kind of spurious stem, often of considerable size.

Family URANEÆ, Lindl.

Genus MUSA, Tournef.

228. A transverse section of the stem of a Banana, *Musa Cavendishii*. The external portions are composed of two layers of square cells, like the air-cells in many of the water-plants; whilst the internal portion, which has a soft pulpy appearance, is almost wholly made up of spiral vessels: the latter occur in such numbers that the natives make them up into bundles, and they are employed as a slow match for lighting pipes, &c. These vessels are of the variety described in the Histological Catalogue as the compound spiral with vertical connecting bands.

Fig. Lindl. Veg. Kingd. p. 163.

Hab. Tropical countries.

Presented by E. W. Cooke, Esq., A.R.A.

Order IX. MARANTACEÆ, R. Br.

Herbaceous tropical plants destitute of aroma ; rhizome often tuberous and abounding in starch.

Genus MARANTA, Plum.

229. The tuberous rhizome of *Marantia arundinacea*, Linn., the plant which furnishes the true West Indian Arrow Root of commerce.

Fig. Pereira, Mat. Med. vol. ii. part 1. p. 1109.

Hab. West Indies. *Presented by J. Morris Bennett, Esq.*

Order X. JUNCACEÆ, Lindl.

Herbaceous plants with fascicled or fibrous roots. Leaves fistular or flat, and channeled with parallel veins.

Genus JUNCUS, Decand.

230. A portion of the stem of a Rush, *Juncus serratus*, showing the spiral arrangement and peculiar fibrous structure of the bases of the leaves when deprived of their investing membranes.

Hab. South Africa. *Presented by Messrs. Wicks and Ghislin.*

231. A portion of a small stem of *Juncus serratus*. The exterior is covered with black, horse-hair like fibres, which are connected together by short transverse bands, as in the preceding specimen ; these fibres consist of the middle portion or framework of long sheathing leaves.

Presented by Messrs. Wicks and Ghislin.

232. A series of fibres of another species of *Juncus*, *Juncus Trista* ; they are of various sizes, and many of them exceed three feet in length. In consequence of the smoothness of their exterior, and their capability of taking various dyes, they might be employed as substitutes for horse-hair and bristles.

Hab. South Africa. *Presented by Messrs. Wicks and Ghislin.*

Several species of *Juncus* occur in Southern Africa. The two above described are remarkable for the abundance of strong fibres of various

sizes, rendering them applicable for a variety of useful purposes, such as for weaving, the manufacture of brushes, cordage, paper, &c.

Order XI. LILIACEÆ, Decand.

Herbaceous plants, shrubs or trees, with bulbs, tubers, rhizomes, or fibrous roots. Leaves narrow, with parallel veins, never articulated to the stem.

Family *Asparagæ*, Lindl.

Genus *DRACÆNA*, Vaudell.

233. A transverse section of a branch of the celebrated Dragon Tree of Teneriffe, *Dracæna Draco*, Willd. The interior, it will be noticed, is quite white, the exterior bright crimson-red, the cells of the latter being full of the coloured resinous material known as Dragon's blood.

Fig. Lindley, Veg. Kingd. p. 204.

Hab. Oratava, Teneriffe. *Presented by Herbert C. Blackburn, Esq.*

The tree from which this specimen was taken, is supposed to be one of the oldest of the living inhabitants upon the surface of the globe; according to Lindley, it was an object of antiquity as long ago as A.D. 1402, and is still alive.

Order XII. JUNCAGINACEÆ, Lindl.

Herbaceous, aquatic, or marsh-plants, whose leaves have in all cases parallel veins, whether they are narrow and grassy, or broad and quite different from the leaf-stalk.

Genus *OUVIRANDRA*, Thouars.

234. A leaf of the Lattice Plant, *Ouvirandra fenestralis*, Thouars; it is made up of a series of parallel veins connected together at nearly equal distances by transverse bands of the same grassy material as the veins, thus forming a square open network, without any trace of upper or under cuticle.

Fig. Lindley, Veg. Kingd. p. 210.

Hab. Marshy places in tropical countries.

Presented by N. B. Ward, Esq., F.R.S.

Class V. DICTYOGENS.

The plants composing this Class are but few in number ; they have a broad net-veined foliage, which usually disarticulates with the stem. Although they have some characters in common with Endogens, yet in the rhizome the wood is disposed in a compact circle, below a cortical integument, and surrounding a true pith. In one species of Sarsaparilla, *Smilax aspera*, the woody matter is disposed in the form of a cylinder, enclosing a centre of soft cellular matter ; and the vessels of the cylinder have an evident tendency to arrange themselves in lines forming rays from the centre, thus foreshadowing the medullary rays of Exogens.

Order XIII. SMILACEÆ, Lindl.

Genus SMILAX, Linn.

235. A portion of the root of the West Indian Sarsaparilla, *Smilax officinalis* : when examined with a pocket lens, the transverse section exhibits a thick exterior cortical layer of a brown colour, separated by a broad zone of cellular tissue from a more compact zone, made up of woody fibres and vessels ; this zone immediately surrounds the central pith.

Fig. Lindl. Veg. Kingd. p. 215.

Hab. Tropical parts of Asia and America.

Purchased.

Order XIV. DIOSCOREACEÆ, Lindl.

Twining shrubs with large tubers, either above or below ground. Leaves with reticulated veins.

Genus TESTUDINARIA, Burch.

236. A portion of the truncate root-stock of the Elephant's Foot plant, *Testudinaria elephantipes*, Burch. It is a rough brown cork-like looking substance, and from the upper part of this thick mass a climbing stem is sent off. As in the Dictyogens generally, there is no regular disposition of the wood into zones with medullary rays crossing them in a radiating direction.

Fig. Eng. Cyclop. vol. iv. p. 1045.

Hab. West Indies. Cape of Good Hope.

Purchased.

Class VI. GYMNOGENS.

The members of this Class have nearly an equal relation to flowering and flowerless plants, and in them there is also a plain transition from the highest form of organization to the lowest. The two most remarkable of the orders are the *Coniferæ* and *Cycadeæ*. Of these, the former is connected with Lycopodiums, among Acrogens, by means of the fossil genus *Lepidodendron*. The arrangement of their woody fibres is in zones as in exogenous plants, but the fibres themselves are remarkable for a peculiar porous tissue occurring on their sides, by which character they can alone be distinguished from all other plants.

Order XV. CYCADEÆ.

The Cycads are characterized by their trunk growing in a cylindrical unbranched manner, in consequence of the development of one terminal bud only. Like the *Coniferæ*, their seeds are naked, and their wood arranged both in concentric zones (which in *Cycas* are numerous) and in a confused manner in the central pith. The woody fibres are characterized by porous markings on their sides.

Genus CYCAS, Linn.

237. The entire trunk with the leaf-stalks of a *Cycas*, *Cycas circinalis*, Willd.; it is of cylindrical figure, and about three inches in diameter. The base, when examined, exhibits two well-defined zones of wood.

Fig. Eng. Cyclop. vol. ii. p. 264.

Hab. Moluccas.

Presented by J. M. Dempsey, Esq., M.D.

238. The female frond of a *Cycas*, *Cycas revoluta*, Linn., showing four small fruits near the base.

Fig. Lindley, Veg. Kingd. p. 224.

Hab. Temperate parts of America and Asia.

Presented by James Yates, Esq., F.R.S.

239. Two specimens of the fruit of *Cycas revoluta*, Linn. They are of a pink

colour and covered with yellow hairs, which exhibit the remarkable fact of membrane unrolling spirally.

Fig. Quekett, Hist. Lect., vol. i. p. 100. *Presented by John Quekett.*

Genus ENCEPHALARTOS, Lehm.

240. A transverse section of the stem of a Cycad of large size, *Encephalartos Caffer*, Lehm. It shows in a remarkable manner the zones of wood and the lozenge-shaped scars of the large broad leaf-stalks.

Presented by James Yates, Esq., F.R.S.

Genus ZAMIA, Linn.

241. A transverse section of the stem of a species of *Zamia*, showing in the centre three large zones of wood, the outer one presenting an undulating character, as in the Ferns. The outer portion of the section is composed principally of cellular tissue, in which small bundles of wood are imbedded, as in the Palms.

Fig. Lindl. Veg. Kingd. p. 224.

Hab. Tropics ; temperate parts of America and Asia. *Purchased.*

242. Two leaves of a species of *Zamia* ; they are pinnated, hard and woody.

Purchased.

Order XVI. PINACEÆ, Lindl., CONIFERÆ, R. Brown.

The plants composing this Order are found in nearly all parts of the world ; they are gigantic in size, rapid in growth, robust in constitution, and no order is of more universal importance to mankind, whether viewed with reference to its timber or its secretions.

The woody fibres, like those of Exogens, presently to be described, are arranged in a series of rings, each indicating one year's growth ; these rings are traversed by radiating cells termed medullary rays, but with the exception of a few vessels in the sheath around the pith, no others are found in any part of the trunk.

The woody fibres themselves are of nearly equal size, and like those of the Cycadaceæ, have large pores on their sides.

Genus PINUS, Linn.

243. A transverse section of the trunk of a small Scotch Pine, *Pinus sylvestris*, Linn.; it exhibits a large central pith with ten zones of wood around it, the inner layers of each zone being of a darker colour than the others.
Fig. Lindl. Veg. Kingd. p. 226.
Hab. Scotland. *Presented by P. B. Ayres, Esq., M.D.*
244. A transverse section of the trunk of a Pine, in which the pith occupies the very centre, and the annual layers of wood are disposed in a series of nearly equidistant circles around it. On both its surfaces may be seen the communication between a knot or abortive branch and the pith. *Hunterian.*
245. A branch of the Common Pine, *Pinus sylvestris*, Linn., at the extremity of which is a somewhat globular cluster of cones (about eighty in number). There were no others on the tree.
Hab. Swanage, Dorsetshire. *Presented by Miss Louisa Hewitt.*
246. A transverse section of the trunk of a Larch, *Pinus Larix*, Linn.
Fig. Lindl. Veg. Kingd. p. 228.
Hab. Russia and Scandinavia.
 This tree was one of the seven first introduced into Scotland from Switzerland, in 1737, by a late Duke of Athol.
Presented by Alex. Campbell, Esq., of Monzie, Perthshire.
247. A portion of the above section of the Larch taken from near the centre, to show the great breadth of the annual layers, which exceed $\frac{3}{4}$ ths of an inch in diameter.
Presented by Alex. Campbell, Esq., of Monzie, Perthshire.
248. The trunk of a Pine of unusual growth, brought from Newfoundland by Admiral Sir Thomas Duckworth.
 It presents three great knobby projections or tuberosities, covered externally by a thin and rough layer of bark; it has been divided vertically, and

each section shows the woody fibres in parallel layers in the ordinary portion of the trunk ; but in the dilated portions they have been disturbed and disposed in curves, agreeing with that of the tuberosities.

Presented by Sir Joseph Banks, Bart., F.R.S.

249. The cone of a Stone Pine, *Pinus pinea*, Willd. It has been divided vertically, and shows the thick-walled seeds disposed in two curved rows ; each seed contains a large kernel which is eatable, somewhat resembling an almond in taste, with a slight flavour of turpentine.

Fig. Loud. Enc. Plants, p. 803.

Hab. South of Europe.

Presented by John Quekett.

250. A section of a branch of a Cedar of Lebanon, *Pinus Cedrus*, Linn., *Abies Cedrus*, Mill. This specimen was part of one of the two trees known as "The Brothers;" they were planted by Sir Hans Sloane in the Gardens of the Society of Apothecaries at Chelsea, in 1683.

Fig. Lindl. Veg. Kingd. p. 227.

Hab. Chelsea.

Presented by the Master and Wardens of the Society of Apothecaries.

251. A portion of a branch of one of the Cedars of Lebanon, *Pinus Cedrus*, Linn. ; it is upwards of an inch in diameter, and exhibits forty-nine annual rings, proving that in their native country these trees are of slow growth.

Fig. Lindl. Veg. Kingd. p. 227.

Hab. Mount Lebanon.

Presented by Joseph Bonomi, Esq.

252. A cone of one of the Cedars of Lebanon, which has been divided vertically to show the seeds contained within, which can hardly be distinguished from the dense woody matter of the cone itself.

Hab. Mount Lebanon.

Presented by Joseph Bonomi, Esq.

Genus CUPRESSUS, Tournef.

253. A large knot found imbedded partly in the bark, and partly in the wood of a White Cedar, *Cupressus thyoides*, Willd. ; it has been divided vertically, and both specimens show very distinctly the differences between the "duramen" and "alburnum."

Presented by Mr. George Carter.

254. The cone of a Cypress, *Cupressus sempervirens*, Willd. The scales are slightly separated from each other, so that the central stalk may be observed.

Fig. Lindl. Veg. Kingd. p. 230.

Hab. Smyrna and the East.

Presented by John Falconer, Esq., M.R.C.S.E.

255. A portion of coniferous wood having somewhat of the odour and colour of the Pencil Cedar, but which is exceedingly light and much worm-eaten. Transverse sections, when examined microscopically, exhibit a structure like the Coniferæ generally; but the radial sections are very peculiar, the markings being of oblong figure and small size, as many as four or six occurring in a row in the breadth of a single fibre. *Hunterian.*

256. Three fragments of Coniferous wood, apparently *Larch*, which were picked up by Sir Edward Belcher at Nip Bay, Disaster Bay, Arctic regions, in 1853. They have been long exposed to the weather, and are both encrusted and impregnated with earthy matter.

Presented by Capt. Sir E. Belcher, R.N.

257. A cubical portion of coniferous wood, which appears to have been exposed for a lengthened period to the action of water, all the softer parts of each of the annual layers having been removed, whilst the dense fibres forming the internal portion of each layer have been preserved, and remain as so many ridges. Many kinds of fossil wood are found in the same condition, and no doubt this specimen was preserved by Mr. Hunter to show how the peculiar markings were produced. *Hunterian.*

Genus *ABIES*, Salisb.

258. A portion of the trunk of a White Spruce Fir, *Abies alba*, Ph. It is remarkable for the number of the rings of growth, as many as 58 occurring in the space of two inches.

Fig. Lindl. Veg. Kingd. p. 228.

Hab. Temperate parts of Europe, Asia, and America.

Presented by John Quekett.

Genus ARAUCARIA, Jussieu.

259. A portion of the trunk of a small Norfolk Island Pine, *Araucaria excelsa*, Juss. ; it is provided with a well-developed bark, and in the arrangement of its wood differs in no respect from other Coniferæ.

Fig. Lindl. Veg. Kingd. p. 228.

Hab. Norfolk Island.

Purchased.

Genus DAMMARA, Rumph.

260. A transverse section of the stem of the Kowdie Tree of New Zealand, *Dammara Australis*, Rumph. It is a light compact wood, with rather thick bark, and is now largely employed in the Navy for the tallest masts ; the tree itself sometimes exceeding 200 feet in height.

Fig. Lindl. Veg. Kingd. p. 228.

Hab. New Zealand.

Presented by Benjamin Tucker, Esq.

The resinous matter secreted by the Kowdie Tree, is known in commerce as *Gum Dammur*, and is used in the manufacture of varnish.

Order XVII. TAXACEÆ, Lindl.

The plants composing this Order are either trees or shrubs, with continuous unarticulated branches. They are separated from the Coniferæ by their fruits not being collected into cones, each ovule growing singly and unprotected by hardened scales. The wood of the Common Yew, *Taxus baccata*, has been remarkable from the earliest ages for its elasticity and durability ; and although the general arrangement of the woody zones and medullary rays agrees with that of the Coniferæ, yet the fibres themselves differ widely, those of the Taxaceæ having spiral fibres within them in addition to the bordered pores. The distinction between the heart and sap woods in some of the species of Yew is very strongly marked.

Genus TAXUS, Linn.

261. A transverse section of the stem of a small Yew Tree, *Taxus baccata*, Linn.

It exhibits the rings of growth very plainly, all those in the centre being of a rich red colour, forming the so-called "duramen" or "heart-wood."

Fig. Lindl. Veg. Kingd. p. 230.

Hab. Europe and north of Asia.

Presented by John Quekett.

262. A vertical section of the trunk of a Yew Tree, *Taxus baccata*, Linn., which formed one of the trees of an ancient forest at Hastings, supposed to have been submerged about 600 years ago.

Hab. Hastings. Found at low-water mark.

Purchased.

Order XVIII. GNETACEÆ.

Small trees very much branched, or sarmentose shrubs, secreting watery, not resinous matter, with opposite or clustered branches, and thickened separable articulations.

Genus EPHEDRA, Linn.

263. A portion of a branch of a Joint Fir, *Ephedra distachya*, Willd. ; it shows very distinctly the articulations, and several examples of fructification. The wood in these plants is marked in a somewhat similar manner to that of the Coniferæ.

Fig. Lindl. Veg. Kingd. p. 232.

Hab. Hottest parts of India and Guiana.

Presented by James Yates, Esq., F.R.S.

Class VII. EXOGENS.

The plants composing this Class are the most highly organized of all the Vegetable Kingdom ; they have been termed Exogens from the fact, that during growth the new wood is always added to the outside of that previously developed. In the centre of the stem is a well-marked pith, and in process of growth this is each year surrounded with a zone of wood ; these zones are crossed by elongated flattened cells, which form a medium of communication between the pith and the bark, and are called the medullary rays. The roots of Exogens are without a central pith, and on this account may be readily recognized. Their leaves have the veins ramifying in the most intricate manner from the mid-rib, forming a network more or less minute ; the veins never running parallel with each other as in Endogens. Another great difference between Endogens and Exogens, is that exhibited by the embryo, which in the latter is provided with two lobes or cotyledons, becoming in process of growth rudimentary leaves. In Endogens there is only a single cotyledon, hence it has been customary to consider them as Monocotyledonous, while the Exogens are Dicotyledonous.

Order XIX. BETULACEÆ, Bartl.

Trees or shrubs. Leaves alternate, simple, with the primary veins often running straight from the mid-rib to the margin ; stipules deciduous.

Genus BETULA, Linn.

264. A cubical portion of the American Birch, *Betula alba*, Linn. ; it is a smooth compact wood, and largely used in the manufacture of furniture.

Fig. Lindl. Veg. Kingd. p. 251.

Hab. North of Europe and America.

Presented by John Quekett.

265. A portion of the tough bark of a Birch, *Betula papyracea*, Willd., employed by the North American Indians in the manufacture of boats, shoe-soles, and a variety of domestic utensils and ornamental articles.

Fig. Lindl. Veg. Kingd. p. 251.

Hab. North America.

Presented by John Quekett.

Order XX. SALICACEÆ, Lindl.

Trees or shrubs. Leaves alternate, simple, with deliquescent primary veins, and frequently with glands on the edge or stalks ; stipules deciduous and persistent.

Genus SALIX, Linn.

266. A portion of the branch of a Weeping Willow, *Salix Babylonica*, Willd. ; it is about four inches in diameter, and exhibits fourteen annual layers. The wood is light and porous, and shows traces of decay.

Fig. Loud. Ency. of Plants, p. 822.

Hab. Levant. St. Helena.

This is a portion of the Willow now growing over what was the tomb of Napoleon Buonaparte at St. Helena. *Purchased.*

267. A transverse section of a branch of the same Weeping Willow, *Salix Babylonica*, Willd. One surface has been polished, and it displays a series of black wavy markings, which indicate incipient decay.

Purchased.

Order XXI. URTICACEÆ, Endlich.

Trees, shrubs or herbs ; never milky. Leaves alternate, usually covered either with asperities or stinging hairs, with membranous stipules, which are deciduous or convolute in veneration.

Genus BÆHMERIA, Jacq.

268. A portion of the stem of *Bæhmeria nivea*, Jacq., which yields the fine textile material known as China Grass ; it is of a white colour, and has a large brown pith.

Fig. Lindl. Veg. Kingd. p. 262.

Hab. Nepal and Sikkim. China.

Presented by John Quekett.

269. A series of beautiful silky fibres, known as those of the *China Grass*.

Presented by John Quekett.

Order XXII. ARTOCARPACEÆ, Lindl.

Trees or shrubs abounding in milky juice. Leaves alternate, simple, often lobed, with large deciduous stipules.

Genus CECROPIA, Linn.

270. A portion of the stem of the Trumpet Tree, or Snake Wood, *Cecropia peltata*, Willd. ; it is remarkable for being hollow between the nodes, which are from two to three inches apart, and lined with a hard brown membrane. The wood itself is light and porous, and is employed by the American Indians to produce light by friction.

Fig. Lindl. Veg. Kingd. p. 271.

Hab. Jamaica.

Presented by James D. C. Sowerby, Esq.

271. A portion of wood, which, from its shape and from the paint with which it has been covered, would appear to have formed part of the gunwale of a ship. It is about twenty inches in length and three in breadth, and running through the centre from one end to the other is a cavity, exceeding an inch in diameter, lined with a brown, hard coating, and having imperfect septa at intervals of an inch ; these septa are composed of a thick layer of the same hard tissue as that composing the lining of the tube ; there is no trace whatever of pith in this cavity, but at one end, and close to where a large nail has passed through, may be seen a piece of wood of the same nature as the rest of the specimen, which accurately fills up three of the compartments, and has portions of the septa still adherent to it. When examined microscopically, both the lining of the cavity and the septa exhibit cells almost wholly filled with sclerogenous matter, like those found in the testa of seeds. It would therefore appear that this specimen was part of a plank cut through the exact centre of the tree, which included the pith.

Hab. Found on the beach at Swanage Bay, Dorsetshire.

Presented by Prescott Hewett, Esq., F.R.C.S.E.

Genus *BROSIMUM*, Swartz.

272. A small portion of the Snake or Letter Wood, *Brosimum guineensis*, Sw. It is exceedingly solid, even the vessels themselves being replaced by cells almost wholly filled up with sclerogenous material. Its minute structure is given in the Histological Catalogue, vol. i. pp^s. Q 3, 4, 5 and 6.

Fig. Lindl. Veg. Kingd. p. 271.

Hab. South America.

Presented by John Quekett.

Order XXIII. CORYLACEÆ.

Genus *FAGUS*, Linn.

273. A transverse section of the branch of a Beech Tree, *Fagus sylvatica*, Willd. The pith is excentric, and around it may be seen the annual zones of wood, which are crossed at right angles by well-marked medullary rays of a shining white colour. The bundles of vessels are not disposed on the inner side of the zones, as in the Oak, but in a nearly uniform manner throughout their entire breadth.

Fig. Lindl. Veg. Kingd. p. 291.

Hab. Britain.

Hunterian.

Genus *QUERCUS*, Linn.

274. A vertical section of the trunk of a Cork Tree, *Quercus Suber*, Linn. It shows the longitudinal and transverse sections very beautifully ; in the latter, the immense thickening of the outer layer of bark, forming the substance known as Cork, may be observed. The tree grew in the Gardens of the Society of Apothecaries at Chelsea.

Fig. Lindl. Veg. Kingd. p. 291.

Hab. Southern parts of Europe. *Presented by Robert Warrington, Esq.*

275. Two portions of a small branch of a Cork Tree, *Quercus Suber*, Linn., one of which exhibits the wood and cork in a transverse section, the other in a longitudinal one. In both specimens the distinction between the true bark and the cork is well shown. *Presented by John Quekett.*

276. A portion of the roof of Westminster Hall, which is composed of oak, of the kind termed *Quercus sessiliflora*, Sm.

It is considered to be the finest and most durable of all the English Oaks ; and this specimen, with the exception of being slightly bored by worms, is firm and compact, after an exposure of upwards of 750 years. The oaks found in bogs are said to be of this same species.

Fig. Knight's Eng. Cyclop. vol. iv. p. 518.

Hab. Britain.

Presented by John Quekett.

277. A portion of the trunk of an Oak, probably *Quercus sessiliflora*, Willd. ; it has been buried for ages, is very hard and black, and exceedingly heavy.

Hab. From Pentuan stream tin-works, Cornwall.

Presented by T. H. Stewart, Esq.

278. A transverse section of the trunk of a small Oak, *Quercus pedunculata*, Willd. : one surface has been polished, and the difference between the alburnum and duramen is well-marked, the latter being nearly two inches in breadth. The pith is of small size, and very near the centre ; the zones of wood around it are of nearly uniform breadth, and the medullary rays crossing them at right angles are sharp and well-defined.

Fig. Loud. Ency. of Plants, p. 796.

Hab. Britain.

Purchased.

279. A portion of Oak, about four inches square and two inches thick ; on the part which corresponded to the internal surface of the tree, there is an oval cavity almost entirely occupied by an assemblage of knots, each made up of a series of concentric zones of hardened wood, collected together so as to form a solid mass. The zones around one knot freely anastomose with those of neighbouring knots, and give the surface a beautifully grooved and undulating appearance.

Purchased.

280. A series of Acorns of large size, termed *Velonia*, being the produce of an Oak, *Quercus Ægilops*, Willd. ; they are imported from the Levant for the large amount of tannin they contain.

Fig. Lindl. Veg. Kingd. p. 291.

Hab. The Levant.

Presented by John Quekett.

Order XXIV. JUGLANDACEÆ.

Trees with a watery or resinous juice; leaves alternate, pinnated, usually undotted; stipules none.

Genus JUGLANS, Linn.

281. A transverse section of the stem of a small Walnut Tree, *Juglans regia*, Willd.; the pith is a little excentric, and is surrounded with four zones of smooth, compact wood.

Fig. Lindl. Veg. Kingd. p. 292.

Hab. Great Britain, Persia, Cashmere.

Presented by P. B. Ayres, Esq., M.D.

282. A transverse section of a part of the trunk of a large Walnut Tree, *Juglans regia*, Willd.; it is of very much darker colour than the preceding specimen, beautifully mottled, and on this account largely used for furniture and for the stocks of guns.

Presented by John Quekett.

283. A small branch of a Walnut Tree, which has been divided vertically to show the curious manner in which the pith separates in drying.

Presented by John Quekett.

Order XXV. MENISPERMACEÆ.

Shrubs with a flexible tough tissue and sarmentaceous habit; leaves alternate, entire, rarely sinuously lobed, often palmately nerved and very reticulated.

Genus CISSAMPELOS, Linn.

284. A transverse section of the root of the Pareira brava, *Cissampelos Pareira*, Dec.; it is composed of a series of zones, all of which are crossed at right angles by the medullary rays, which are exceedingly broad and connected together near the bark by curved septa, the wood between them containing large vessels.

Fig. Lindl. Veg. Kingd. p. 309 A.

Hab. West Indies, Madagascar.

Purchased.

Order XXVI. EUPHORBIACEÆ, Juss.

Trees, shrubs or herbaceous plants, often abounding in acrid milk.

Genus *BUXUS*, Tournef.

285. A transverse section of the trunk of a Box Tree, *Buxus sempervirens*, Willd.

It is of oval figure, eight inches in the long, by six in the short diameter. Contrary to the wood commonly seen in this country, this specimen has a large dark spot in the centre, about four inches in diameter, like duramen, but composed of wavy zones of different shades of brown colour.

Fig. Lindl. Veg. Kingd. p. 281.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

Order XXVII. BRASSICACEÆ, Lindl.

Herbaceous plants, annual, biennial, or perennial ; very seldom suffruticose.

Genus *BRASSICA*, Linn.

286. The stalk of an edible Cabbage, *Brassica oleracea*, Linn. ; it is about three feet in length, and sufficiently hard to be used as a walking-stick.

Fig. Lindl. Veg. Kingd. p. 351.

Hab. Jersey.

Purchased.

Order XXVIII. STERCULIACEÆ, Lindl.

Large trees or shrubs. Hairs, if present, stellate. Leaves alternate, simple or compound, sometimes digitate, often toothed, with free deciduous stipules.

Genus *ADANSONIA*, Linn.

287. A specimen of the fruit of the Baobab Tree, *Adansonia digitata*, Willd. It is eleven inches in length, and has a stem about half an inch in diameter,

which is made up of four smaller stems. The juice of this fruit is slightly acid, and used for medicinal purposes.

Fig. Lindl. Veg. Kingd. p. 360.

Hab. Senegal ; East Indies.

Purchased.

Order XXIX. TILIACEÆ, Juss.

Trees or shrubs, very seldom herbaceous plants.

Genus TILIA, Linn.

288. A transverse section of the stem of a Lime Tree, *Tilia rubra*, Linn. It is principally remarkable for the thickness of its bark, the stem itself being two inches in diameter, whilst the bark is one-sixth of an inch. It is from trees of this kind that the bark is obtained for making mats, bags, nets, and a variety of other useful articles.

Fig. Lindl. Veg. Kingd. p. 372.

Fig. Within the tropics, all over the world.

Hunterian.

289. Another portion of the stem of a Lime Tree, *Tilia rubra*, to show the smoothness of the exterior surface of the bark.

Hunterian.

Order XXX. SAPINDACEÆ, Juss.

These are for the most part trees of considerable size, or twining shrubs bearing tendrils.

Genus OPHIOCARYON, Schomb.

290. The fruit of the Snake Nut, *Ophiocaryon paradoxum*, Schomb. The embryo is of large size and black colour, and resembles very much a snake coiled up.

Fig. Lindl. Veg. Kingd. p. 383. Schomb. Ann. of Nat. Hist. vol. v. p. 204.

Hab. Demerara.

Presented by John Quekett.

Order XXXI. CLUSIACEÆ, Lindl.

Trees or shrubs, occasionally parasitical, yielding resinous juice.

Genus PENTADESMA, R. BROWN.

291. The fruit of the Butter Tree, *Pentadesma butyracea*, R. Br. The kernel is cut in slices and eaten with bread as a substitute for butter.

Fig. Lindl. Veg. Kingd. p. 401.

Hab. Cape of Good Hope ; Sierra Leone. *Presented by John Quekett.*

Order XXXII. ZYGOPHYLLACEÆ, Lindl.

Herbaceous plants, shrubs or trees, with a very hard wood, the branches often articulated at the joints.

Genus GUAIAECUM, Plum.

292. A transverse section of the stem of a tree called Lignum Vitæ, *Guaiacum officinale*, Willd. It shows, perhaps, as well as any Exogen the distinction between the alburnum and duramen, the dark colour of the latter being due to the presence of a resin used in medicine under the name of Guaiacum.

Fig. Lindl. Veg. Kingd. p. 479.

Hab. West Indies.

Hunterian.

Genus LAGETTA, JUSS.

293. A transverse section of the Lace Bark Tree, *Lagetta Lintearia*, Juss. It is a light wood having a bark not more than one-sixth of an inch in thickness.

Fig. Lindl. Veg. Kingd. p. 531.

Hab. West Indies.

Hunterian.

294. Portion of the stem of the Lace Bark Tree, *Lagetta Lintearia*, Juss., in which the inner bark has been separated from the stem, and unravelled to show its lace-like character, whence the tree has derived its name.

Hunterian.

295. Separate pieces of the lace-like material from the same tree. One of these has been dyed of a dark colour.

Hunterian.

296. A whip used by the cattle-drivers in the West Indies. The lash is formed of the bark of a tree allied to *Lagetta Lintearia*, Juss. ; it is twisted and knotted, the wood within it having previously been removed.

Presented by W. J. Bernhard Smith, Esq.

Order XXXIII. LAURACEÆ.

Trees often of great size, leaves without stipules, alternate, seldom opposite, entire, or very rarely lobed.

Genus CAMPHORA, Nees.

297. A vertical section of the wood of the Camphor Tree, *Camphora officinarum*, Nees. It has been split in various directions, and in each of the cavities thus formed, crystals of camphor of various sizes may be seen.

Fig. Lindl. Veg. Kingd. p. 537.

Hab. Formosa.

Hunterian.

Order XXXIV. FABACEÆ, Lindl.

Herbaceous plants, shrubs or vast trees, very variable in appearance ; flowers polypetalous or apetalous, with a papilionaceous corolla or a leguminous fruit.

Family 1. *Hedysarææ.*

Genus CYTISUS, Linn.

298. A transverse section of the stem of a Laburnum, *Cytisus Laburnum*, Willd. It is about two inches in diameter, and more than one-third of it is

made up of duramen. This has been formed irregularly ; for on two opposite sides it approaches within a short distance of the bark, but in all other parts it is nearly half an inch distant from it.

Fig. Lindl. Veg. Kingd. p. 548.

Hab. Europe.

Presented by John Quekett.

299. A vertical section of the stem of a Laburnum, *Cytisus Laburnum*, Willd. This specimen is evidently one of those on which Mr. Hunter has performed an experiment of removing the bark in a spiral direction.

Hunterian.

Genus *ÆSCHYNOMENE*, Linn.

300. A portion of the stem of the " Shola," *Æschynomene aspera*, Willd., which in some of its characters very closely resembles the plant *Aralia papyrifera*, from which the so-called " Rice Paper" is procured. It is, however, a true stem, not a pith, and traces both of annual layers of growth and of medullary rays may be observed, with the presence of a pith of considerable diameter.

Fig. Rep. of Juries Exhib. 1851, p. 103.

Hab. India.

Presented by John Quekett.

Slices of this plant are largely used in India in the manufacture of hats, boxes, life-buoys, models, &c., for which purposes it is admirably fitted on account of its extreme lightness.

301. A portion of the stem of the " Shola," *Æschynomene aspera*, Willd., from which numerous branches have been given off, each being known by a scar on the outer surface and a large pith-cavity in the centre.

Presented by Mr. John Jameson.

Family 2. *Acaciæ*.

Genus *ACACIA*, Willd.

302. A portion of the branch of an Acacia, *Acacia vera*, Willd. It is of a light yellow colour, and when first developed grew very slowly, the layers of wood being close to each other, and concentric with the pith ; afterwards

the growth was more rapid, and the annual layers of an uniform breadth of $\frac{1}{20}$ th of an inch. The specimen is about three inches in diameter, and of this the duramen occupies nearly two inches and a half.

Fig. Lindl. Veg. Kingd. p. 552.

Hab. Egypt ; Britain.

Presented by John Quekett.

Genus *MIMOSA*, Linn.

303. The seed-pod of *Mimosa scandens*, Linn. ; it is upwards of two feet in length, and consists of six receptacles or compartments, each containing a large round but flattened seed.

Fig. Roxburgh, Flor. Ind. vol. ii. p. 554.

Hab. India.

Presented by John Quekett.

304. A seed taken from the pod of *Mimosa scandens*, Linn.

Presented by John Quekett.

305. The stipulary spine of *Mimosa eburnea*, Willd.

Fig. Roxburgh, Flor. Ind. vol. ii. p. 558.

Hab. Coromandel.

Purchased.

Order XXXV. DRUPACEÆ.

Trees or shrubs. Leaves simple, alternate, usually glandular towards the base.

Genus *CERASUS*, Juss.

306. A thin vertical slice of the wood of the Cherry Tree, *Cerasus communis*, Juss. It is a firm, compact wood, growing rapidly and having few vessels ; although the section is two inches in breadth, only twelve zones are comprehended in this space.

Fig. Lindl. Veg. Kingd. p. 558.

Hab. Cold and temperate climates in the Northern Hemisphere.

Presented by John Quekett.

Genus *PRUNUS*, Linn.

307. A transverse section of the stem of an Apricot Tree, *Prunus Armeniaca*, Linn. : the wood is two inches in diameter, and is surrounded by a bark

in some places a quarter of an inch in thickness. The pith is small, but the annual layers and the medullary rays are well shown.

Fig. Lindl. Veg. Kingd. p. 558.

Hab. Cold and temperate climates in the Northern Hemisphere.

Presented by P. B. Ayres, Esq., M.D.

308. A transverse section of a large trunk, apparently of the Apricot Tree, *Prunus Armeniaca*, Linn. It is nearly eight inches in diameter, and exhibits two central piths, around each of which are many annual layers, the section having been taken at the bifurcation of a branch. The outline of the wood is rather irregular, but the bark in some places is three-quarters of an inch in thickness. *Purchased.*

Order XXXVI. ROSACEÆ, Juss.

Herbaceous plants or shrubs. Leaves simple or compound, alternate, often with two stipules at their base, occasionally dotted.

Genus ROSA, Tournef.

309. A transverse section of the stem of the Dog Rose, *Rosa canina*, Linn. It is a firm wood with a large pith, and exhibits the medullary rays very plainly.

Fig. Lindl. Veg. Kingd. p. 564.

Hab. Britain.

Presented by P. B. Ayres, Esq., M.D.

Genus QUILLAIA, Mol.

310. A transverse section of the stem of the Soap Wood, *Quillaia saponaria*, Mol. The bark contains a large amount of saponaceous material, and is used as a substitute for soap.

Fig. Lindl. Veg. Kingd. p. 564.

Hab. South America.

Presented by John Quekett.

311. A portion of the bark of the Soap Wood, termed "Quillai," *Quillaia saponaria*, Mol. When placed in water, it rapidly swells up and gives out a secretion very like soap ; and when made into a fine powder, it excites violent sneezing.

Presented by Mr. W. G. Searson.

Order XXXVII. ULMACEÆ, Mirbel.

Trees or shrubs with rough, alternate, usually deciduous leaves, each having a pair of deciduous stipules at its base.

Genus ULMUS, Linn.

312. A transverse section of the trunk of an Elm, *Ulmus campestris*, Linn., which in process of growth became split vertically; the specimen shows the remarkable manner in which the outer layers of the new wood and the bark are coiled upon themselves to fill up the gap.

Fig. Lindl. Veg. Kingd. p. 580.

Hab. Britain.

Presented by James Yates, Esq., F.R.S.

313. A transverse section of the trunk of an Elm, *Ulmus campestris*, Linn. It has a large hole bored through it, and formed part of a pipe for the conveyance of the water with which London was formerly supplied.

Purchased.

Order XXXVIII. EBENACEÆ, Vent.

Trees or shrubs, without milk and with heavy wood.

Genus DIOSPYRUS, Linn.

314. A transverse section of the tree which yields the Black Ebony of commerce, *Diospyrus melanoxyton*, Linn.: it is three inches in diameter; and of this, two inches consist of the hard black duramen, the rest of a light-coloured alburnum.

Fig. Lindl. Veg. Kingd. p. 596.

Hab. Ceylon.

Presented by C. F. White, Esq.

Genus SACANDRA.

315. A transverse section of the stem of the tree which yields the Green Ebony

of commerce, *Sacandra ovalifolia*, Willd. The duramen is much larger in proportion to the size of the specimen than that of the black species.

Fig. Report of Juries, Exhib. 1851, p. 86.

Hab. Brazil.

Presented by John Quekett.

Order XXXIX. AQUIFOLIACEÆ, Decand.

Evergreen trees or shrubs, whose branches are often angular.

Genus ILEX, Linn.

316. A transverse section of the stem of the Common Holly, *Ilex aquifolium*, Linn. It has a small pith, which is surrounded by zones of wood about an eighth of an inch in breadth ; these are crossed by a very large number of well-marked medullary rays.

Fig. Lindl. Veg. Kingd. p. 597.

Hab. Europe.

Presented by P. B. Ayres, Esq., M.D.

Order XL. OLEACEÆ, Lindl.

Trees or shrubs ; branches usually dichotomous, and ending abruptly by a conspicuous bud. Leaves opposite, simple, sometimes pinnated.

Family Fraxineæ.

Genus FRAXINUS, Tournefort.

317. A transverse section of a branch of an Ash, *Fraxinus excelsior*, Willd. ; it has been taken from the vicinity of a bifurcation, as on one side a single portion of pith is found, whilst on the opposite two masses of it may be seen, the one being about two inches distant from the other. The principal portion of pith is very excentric, and surrounded by upwards of thirty zones, each having numerous large vessels on their inner side ; some of these zones are nearly a quarter of an inch in breadth. The second

mass of pith has only four zones around it, which shows that just at this point a branch was given off.

Fig. Lindl. Veg. Kingd. p. 616.

Hab. Temperate latitudes.

Hunterian.

318. A portion of a plank of Ash, *Fraxinus excelsior*, Willd., largely used in this country for building carts and vans. In the centre may be seen a series of zones about eight in number, and upwards of one-eighth of an inch in breadth ; these are succeeded by a series of narrower zones, then again by broader ones, and these last by narrower ones, until near the margin they are so narrow and close together, that nothing but the vessels, which are always to be met with on the inner side of each zone, are distinguishable.

Presented by E. Green, Esq.

The arrangement of the zones in this specimen, shows that when the tree (which grew in a plantation) had plenty of light and air, a large amount of wood was developed ; but when these were diminished by the crowding of other trees, little more than the vessels were formed ; a thinning-out of the timber then took place, and broad zones were the consequence.

319. A cubical portion of Ash, *Fraxinus excelsior*, Willd., of the finest quality, all conditions having been favourable to its growth. Although the surface representing the transverse section of the wood is five inches square, yet there are not more than twenty-six zones. Each zone, it will be seen, is accompanied by vessels on its inner side, but all the remaining part of the zone is made up of nearly solid wood.

Presented by E. Green, Esq.

This and the preceding specimen point out in a remarkable manner, that, contrary to the general opinion, the timber of a quickly-grown tree is far superior to one more slowly grown ; in the former case, the woody tissue, upon which the strength depends, is largely developed, whereas in the latter little more than vessels are to be found. These points are perhaps better illustrated by sections prepared for the microscope by Mr. Green, and many from the Ash and other trees will be found in the Histological Collection.

320. A portion of wood and bark removed from the exterior of an Ash Tree, *Fraxinus excelsior*, Willd. ; a branch is given off from the wood, and by a process of grafting has been bent round in the form of a loop, and has become united to the wood of the parent tree at a distance of two inches from where it was first given off. When the cut surface is examined, the ends of both branches, each having a large pith, may be observed.

Purchased.

Order XLI. SOLANACEÆ, Lindl.

Herbaceous plants or shrubs. Leaves alternate, undivided or lobed, sometimes collateral.

Genus MANDRAGORA, Tournef.

321. The forked root of the Mandrake, *Mandragora officinalis*, Tournef., largely used in olden times in amorous incantations. The broad part of each root exhibits an appearance very like a human face, and the popular notion was that it shrieked when torn out of the ground.

Fig. Lindl. Veg. Kingd. p. 620. Sat. Mag. vol. viii. p. 228.

Hab. Britain.

Presented by Charles Hatchett, Esq., F.R.S.

Order XLII. BIGNONIACEÆ, R. Brown.

Trees, shrubs, or occasionally herbs, often twining or climbing.

Genus CALOSANTHES, Blum.

322. An elongated seed-pod of *Calosanthès indica*, Bl. ; one of the valves has been removed in order to display the enormous number of large-winged seeds contained between them, some of which measure nearly three inches in length.

Fig. Lindl. Veg. Kingd. p. 677.

Hab. India.

Presented by John Quekett.

323. Two of the large-winged seeds removed from the pod of *Calosanthès indica*, Bl. *Presented by John Quekett.*

Order XLIII. HALORAGACEÆ, Lindl.

Herbaceous plants or under shrubs, often growing in wet places.

Genus TRAPA, Linn.

324. Two specimens of the fruit of *Trapa bicornis*, Linn. ; they are used as food by the Chinese.
Fig. Lindl. Veg. Kingd. p. 723.
Hab. India. China. *Presented by John Quekett.*

Order XLIV. MYRTACEÆ, R. Brown.

Trees or shrubs. Leaves opposite or alternate, entire, usually with transparent dots, and a vein running parallel with their margin.

Genus EUCALYPTUS, Hérít.

325. A portion of the exterior of one of the Gum Trees of New Holland, *Eucalyptus*. On one of its surfaces, which was immediately under the bark, may be seen a curious arrangement of conical projections ; whilst on the opposite one, a corresponding series of depressions may be observed. One surface has been polished, and shows the disposition of the wood to form the projections.
Fig. Lindl. Veg. Kingd. p. 737.
Hab. Van Diemen's Land. *Presented by John Quekett.*

Order XLV. LECYTHIDACEÆ, Lindl.

Large trees with alternate entire or toothed leaves, minute deciduous stipules, and no pellucid dots.

Genus BERTHOLLETIA, Humb. et Bonpl.

326. The fruit of the *Bertholletia excelsa*, Humb. et Bonpl. ; known in commerce as the Brazil Nut.

Fig. Lindl. Veg. Kingd. p. 740.

Hab. South America.

Purchased.

Order XLVI. CAPRIFOLIACEÆ, Rich.

Shrubs or herbaceous plants, with opposite leaves, destitute of stipules. Flowers usually corymbose, and often sweet-scented.

Genus SAMBUCUS, Tournef.

327. A portion of a branch of an Elder Tree, *Sambucus nigra*, Willd. ; it has been divided vertically to show the large and compact pith.

Fig. Lindl. Veg. Kingd. p. 767.

Hab. Britain.

Hunterian.

328. Another section of the same Elder.

Hunterian.

Order XLVII. ARALIACEÆ, Richard.

Trees, shrubs or herbaceous plants, with, in all respects, the habits of Umbellifers.

Genus ARALIA, Linn.

329. A portion of the stem of the Rice-paper Plant, *Aralia papyrifera*, Hooker.

It is about an inch in diameter, and of this eight-tenths are occupied by a delicate white cellular pith, from which the so-called Rice-paper is cut. The central portion of the pith exhibits a beautiful structure.

Fig. Lindl. Veg. Kingd. p. 781. Rep. of Juries, Exh. of 1851, pp. 103-4.

Hab. China.

Presented by W. Lockhart, Esq., F.R.C.S.E.

330. Two portions of the cellular pith which have been removed from their outer casing of wood, and are ready for cutting into the sheets of *Rice-paper*.

Presented by W. Lockhart, Esq., F.R.C.S.E.

331. A series of small sheets of *Rice-paper*, which have been cut from the pith of the same plant.

Presented by W. Lockhart, Esq., F.R.C.S.E.

332. A series of sheets of *Rice-paper* of large size, some measuring as much as twelve inches in length by seven in breadth ; a few of them are in their natural white state, whilst others have been dyed of various colours.

Presented by Mrs. John Quekett.

333. A small sheet of *Rice-paper* upon which a drawing has been made by a native Chinese artist, as an example of the use generally made of this material by these ingenious people.

Presented by Miss E. Leila Scott.

Genus *HEDERA*, Linn.

334. A branch of Ivy, *Hedera helix*, Linn., which has grown round the trunk of an Oak ; and so firmly has it embraced it, that the Ivy has been quite overgrown by the Oak. The bark of the Oak has been removed, so that all parts of the Ivy uncovered by the Oak are plainly seen.

Fig. Lindl. Veg. Kingd. p. 781.

Hab. Matfield, Kent.

Presented by Henry Blanshard, Esq.

335. A vertical section of the specimen above described, taken through a part where the Ivy is completely invested by the Oak ; the former has been divided transversely, and its structure is well-displayed, the medullary rays and annual layers of growth being as conspicuous as those of any ordinary Exogen.

Presented by Henry Blanshard, Esq.

Order XLVIII. *PROTEACEÆ*, Juss.

Shrubs or small trees ; branches usually umbellate ; leaves hard, dry, divided or undivided, opposite or alternate, without stipules, their cuticle often covered equally on both sides with stomates.

Genus *XYLOMELUM*, Smith.

336. The fruit of *Xylomelum pyriforme*, Smith.

Fig. Lindl. Veg. Kingd. p. 534.

Hab. New South Wales.

Presented by Mr. J. T. Norman.

Genus *BANKSIA*, R. Br.

337. The fruit of a *Banksia*, *Banksia æmula*, R. Br.

Fig. Lindl. Veg. Kingd. p. 533.

Hab. New South Wales.

Presented by Mr. J. T. Norman.

Order XLIX. LEGUMINOSÆ, Juss.

Herbaceous shrubs, plants, or vast trees, extremely variable in appearance.

Genus *HYMENÆA*, Linn.

338. The legume of *Hymenæa Courbaril*, Willd.

Fig. Lindl. Veg. Kingd. p. 556.

Hab. South America.

Presented by Mr. J. T. Norman.

Order L. LORANTHACEÆ, Lindl.

Shrubby plants, in almost all cases growing into the tissue of other vegetables, as true parasites.

Family *Viscaceæ*, Miers.Genus *VISCUM*, Tournef.

339. A transverse section of the stem of a Mistletoe, *Viscum album*, Tournef.

Like other Exogens, it exhibits a pith, bark, annual layers and medullary rays.

Fig. Lindl. Veg. Kingd. p. 791. Miers, Ann. Nat. Hist. 2nd ser. viii. p. 179. 1851.

Presented by John Quekett.

It may be remarked, that both pith, bark and wood are of a light green colour.

340. A specimen of Mistletoe, *Viscum album*, Tournef., parasitic on the Lime Tree, *Tilia rubra*.
Presented by Robert Cuff, Esq.
341. A specimen of Mistletoe, *Viscum album*, Tournef., parasitic on the Apple Tree, *Pyrus malus*.
Presented by John Quekett.
342. A specimen of Mistletoe, *Viscum album*, Tournef., parasitic on the Apple Tree, *Pyrus malus*.
Presented by John Quekett.
343. A specimen of Mistletoe, *Viscum album*, Tournef., parasitic on the Hawthorn, *Cratægus*.
Presented by Mrs. R. T. Combe.
344. Specimen of Mistletoe, *Viscum album*, Tournef., parasitic on the Laurel, *Laurus*.
Presented by John Quekett.
345. Specimen of the Mistletoe, *Viscum album*, Tournef., parasitic on the Abele, *Populus alba*.
Presented by Mr. Maurice Gillett.

GENUS MYZODENDRON, Sol.

346. A portion of the stem of *Myzodendron punctulatum*, Banks and Sol. ; it is of small size with a thick bark of a brown colour. The pith is about one-twelfth of an inch in diameter, surrounded by a zone of wood, the fibres of which are remarkable for their resemblance to scalariform tissue.
Fig. Lindl. Veg. Kingd. p. 791. Ann. des Scien. Nat. 3rd ser. vol. v. p. 193.
Hab. Terra del Fuego. Presented by Joseph Dalton Hooker, Esq., F.R.S.

Woods exhibiting certain peculiarities, but of which the names and localities are unknown.

347. A portion apparently of the branch of a tree, from one-half the circumference of which, a warty excrescence, two inches and a half in diameter, has been developed. It has been divided vertically, and the growth is found to be made up of an immense collection of small abortive branches or knots. The wood itself is almost as dense as that of the Box.

Purchased.

348. A long cylindrical stem of hard wood, which has been mounted as if for a walking-stick. It is surrounded by a climbing plant, having a considerable number of large spines developed on those sides which are in contact with the wood; these spines exceed half an inch in length, and are firmly lodged in depressions in the wood. Several portions of the climber have been removed, and the pits in which the spines were lodged are still perceptible. It would appear therefore that the climber had been detached after the main stem was cut down, as little or no attempt has been made to fill up the holes.

349. A long portion of the root of an Exogen, several branches of which, by a process peculiar to the Chinese, have been made to anastomose. The specimen was mounted as a walking-stick, and was coated with black paint; when this was the case, it could not be ascertained whether the anastomoses were true or false, but on removing the paint the union was found complete.

Hab. Said to be from China.

Purchased.

350. A portion of a gnarled branch of a Chinese tree, the wood of which is of a light brown colour. It is the kind used by the Chinese for making grotesque figures with the aid of a little carving.

Hab. China.

Purchased.

Order LI. OROBANCHACEÆ, Lindl.

Herbaceous leafless plants growing parasitically upon the roots of other species; stems covered with brown or colourless scales.

Genus LATHRÆA, Linn.

351. The Greater Tooth-wort, *Lathræa squamaria*, Linn.

Fig. Lindl. Veg. Kingd. p. 610.

Hab. Various parts of the world. Cheltenham.

Presented by W. J. Bernhard Smith, Esq.

Order LII. CUSCUTACEÆ, Lindl.

Leafless, climbing, colourless parasites, with the flowers in dense clusters.

Genus CUSCUTA, Tournef.

352. The Common Dodder, *Cuscuta Europæa*, Tournef.

Fig. Lindl. Veg. Kingd. p. 634.

Hab. Europe. Hartlip, Kent.

Presented by Miss E. Leila Scott.

Inflorescence of Plants.

353. A case containing examples of the inflorescence of the following British Exogens :—

- | | |
|---|--|
| 1. Wood Anemone, <i>Anemone nemorosa</i> . | 11. Trefoil, <i>Achillea rosea</i> . |
| 2. Monk's-hood, <i>Aconitum Napellus</i> . | 12. Corn-cockle, <i>Centaurea cyanus</i> . |
| 3. Larkspur, <i>Delphinium consolida</i> . | 13. Heather, <i>Calluna vulgaris</i> . |
| 4. Ten-week Stock, <i>Mathiola annua</i> . | 14. Primrose, <i>Primula vulgaris</i> . |
| 5. Heartsease, <i>Viola tricolor</i> . | 15. Cyclamen, <i>Cyclamen persicum</i> . |
| 6. Pelargonium, <i>Pelargonium malifolium</i> . | 16. Convolvulus, <i>Convolvulus minor</i> . |
| 7. Furze, <i>Ulex Europæus</i> . | 17. Forget-me-not, <i>Myosotis palustris</i> . |
| 8. Hawthorn, <i>Crataegus oxyacanthus</i> . | 18. Salvia, <i>Salvia coccinea</i> . |
| 9. Cuphea, <i>Cuphea coccinea</i> . | 19. Foxglove, <i>Digitalis purpurea</i> . |
| 10. Chamomile, <i>Anthemis nobilis</i> . | 20. Toad-Flax, <i>Linaria vulgaris</i> . |

These specimens were dried and prepared in a peculiar way by Mr. W. Stevens of Kingsland. *Purchased.*

Pollen of Plants.

354. A large cubical mass of a yellow colour, termed *Punga Punga*, or Native Bread. When examined microscopically, it is found to be made up of little else than grains of pollen.

Hab. Van Diemen's Land.

Purchased.

Specimens showing the effects of a partial removal of the bark.

355. A series of specimens of the branches of trees, such as the Pear, Apple, Cherry, and Laburnum, upon which Mr. Hunter has performed certain experiments, by removing portions of the bark. In three of the speci-

mens a square piece only has been removed ; in one the removal was in a spiral direction, and this is particularly alluded to in a manuscript volume by Mr. Hunter, entitled “ On Vegetation.” *Hunterian.*

Two other specimens, in all probability made at the same time as the preceding, are placed in the Pathological Series, to illustrate the fact, that as in bone, when the periosteum is removed, the bone beneath it dies ; so in plants, when the bark is removed, the wood thus exposed perishes also.

Woods used for Medicinal, for Dyeing and for various ornamental purposes.

356. A series of specimens of woods which have been cut and polished to exhibit their structure in the longitudinal and transverse directions. Among them may be noticed the following :—

Ash.	Iron Wood.	Partridge Wood.
Bird's-eye Maple.	Jasmine.	Pine from China.
Brazil Wood.	Lace Bark Tree.	Peach.
Braziletto.	Laburnum.	Portugal Laurel.
Cabbage Tree.	Letter Wood.	Quince.
Calumba.	Lignum Vitæ.	Red Bullet Wood.
Camphor.	Locust.	White Bullet Wood.
Cam Wood.	Logwood.	Rosewood.
Fustic.	Mahogany.	Sabacu.
Green Heart.	Mastic, white.	Sapan Wood.
Grey Wood.	Mastic, yellow.	Satin Wood.
Green Ebony.	Oak.	Upas.

Fabrics made from the inner bark of trees.

357. Two large portions of Cloth from the South Sea Islands, made from the inner bark of a tree, probably *Morus papyrifera*, Linn. ; both exhibit parallel markings, and one of the specimens is partially stained of a rich brown colour.

Fig. Capt. Cook's Voyages, by Hogg, vol. i. p. 97.

Hab. South Sea Islands.

Hunterian.

358. A series of small specimens of Cloth of different degrees of thickness and quality ; various coloured patterns are printed upon them, and all exhibit the parallel striæ above mentioned ; these are of four different degrees of

fineness, and are produced by a wooden four-sided instrument, termed a mallet or cloth-beater. These specimens of cloth are arranged according to their uses, for summer and winter clothing, and for mourning.

Fig. Capt. Cook's Voyages, by Hogg, vol. i. p. 97.

Hab. South Sea Islands.

Hunterian.

The label attached to these specimens states they were brought home by Sir Joseph Banks and Dr. Solander, who accompanied Capt. Cook in his first voyage.

359. Another series of small specimens of Cloth, showing a greater variety of colour and pattern. *Purchased.*

360. Specimens of the stem and leaves of the Tree, probably *Morus papyrifera*, Linn., from the inner bark of which the above cloths were obtained.

Fig. Wilson's Missionary Voyage, p. 389.

Hab. Otaheite.

Hunterian.

361. A mallet or cloth-beater which the natives of Otaheite use to beat the bark above described. This instrument is formed of a compact and heavy wood, named *Etoa*. Each of its four sides has longitudinal grooves of different widths and depths. When using the mallet, they commence with the coarsest and finish with the finest set of grooves.

Fig. Capt. Cook's Voyages, by Hogg, vol. i. p. 97.

Presented by Sir William Fraser (1810).

Fibrous Skeletons of Plants.

362. An oval glass shade containing the skeletons of the fruits and leaves of the following plants :—

Fruits :—

- | | |
|---|---|
| 1. The Poppy, <i>Papaver somniferum</i> . | 6. The Henbane, <i>Hyoscyamus niger</i> . |
| 2. Stramonium, <i>Datura Stramonium</i> . | 7. Jerusalem Sage, <i>Phlomis fruticosa</i> . |
| 3. The Winter Cherry, <i>Physalis Alkekengi</i> . | 8. Honesty, <i>Lunaria vulgaris</i> . |
| 4. Nicandra, <i>Nicandra cærulea</i> . | 9. The Garden Mallow, <i>Malope</i> . |
| 5. The Bell-flower, <i>Campanula</i> . | 10. The Tree Mallow, <i>Lavatera</i> . |

Leaves :—

- | | |
|---|--|
| 11. Magnolia, <i>Magnolia grandiflora</i> . | 15. The Maple, <i>Acer</i> . |
| 12. Magnolia, <i>Magnolia cærulea</i> . | 16. The Black Poplar, <i>Populus nigra</i> . |
| 13. The Holly, <i>Ilex Aquifolium</i> . | 17. Common Ivy, <i>Hedera helix</i> . |
| 14. The Pear, <i>Pyrus communis</i> . | |

Prepared and presented by Miss Turner of Queen's Square, Westminster.

363. The internal skeleton of a species of Gourd, which in Turkey is used as a flesh brush after a bath. It is composed of a coarse network of tough woody fibres, which will bear a considerable amount of rough usage without breaking. *Presented by William Birch, Esq., F.R.C.S.E.*

364. The internal skeleton of a Pear, *Pyrus communis*, Linn. The stem is preserved, and from it may be noticed a series of branching fibres, which served as a support to the cellular and gritty tissues. This specimen has been upwards of fifty years in the bottle in which it is now shown.

Presented by John Day, Esq.

365. Two glazed frames containing skeletons of the leaves of the following plants :—

Poplar.	Magnolia.
Aspen.	Sterculia.
Hawthorn.	Fig Tree.
Varieties of Sycamore.	Holly.
Varieties of Maple.	Box Tree.
Logwood.	Varieties of the Tea Plant.
Tulip Tree.	Dogwood.

These specimens were prepared by William Dobson, Esq., of Eden Hall, Cumberland, in the year 1782, and purchased in 1812 of Dr. Buchan, author of 'Domestic Medicine,' &c.

366. The skeleton of the Leaf of a *Sterculia*. It is of large size, measuring upwards of eighteen inches in the long, by sixteen in the short diameter. *Hab.* History unrecorded.

Siliceous Skeletons of Plants.

367. A portion of the Dutch Rush, *Equisetum hyemale*, which has been boiled

for a long time in strong nitric acid, leaving nothing but a white skeleton composed of silica.

Fig. Hist. Cat. vol. i. Prep. A o l. Pl. 10. fig. 1.

Hab. Europe.

Purchased.

Other specimens of the siliceous skeletons of Endogens occur in the early parts of the present volume, as for instance Preps. 22, 30, 36.

368. A portion of the bark of a tree from South America, which contains so much silica, that it is employed in the manufacture of a species of pottery.

Hab. South America.

Presented by John Quekett.

Plants which have been subjected to the action of intense heat.

369. A portion of a bundle of Wheat Straw, which has been subjected to the intense heat of a coke oven for many hours. It is almost wholly converted into coke, but in the majority of instances the true shape of the individual straws is preserved.

Presented by Mr. John Jameson.

370. A series of vegetable substances, such as Wheat, Straw, Dutch Matting, Paper, &c., which have been subjected to the heat of a coke oven. In many of the specimens the external form is more or less perfectly preserved, but in others there is a considerable coating of coke deposited upon them.

Presented by Mr. John Jameson.

371. A mass of vitreous material, formed by the combustion of a large Wheat-stack. The upper surface has a flocculent appearance and is of a light green colour, but the great bulk of the specimen is as compact and heavy as the densest glass.

Presented by — Lee, Esq., D.C.L.

CATALOGUE.

RECENT INVERTEBRATA.

Class PROTOZOA.

Order RHIZOPODA.

Suborder FORAMINIFERA, *d' Orb.*

(RHIZOPODES, *Dujard.* ; POLYTHALAMIA, *Ehrenb.*)

THE Foraminifera belong to the Family Rhizopoda of the Class Protozoa, and are a calcareous-shelled group, of marine habits. The shells are symmetrical, of various patterns, and are formed of either one or of two or more connected loculi or chambers; these are united by the sarcode (or fleshy matter) passing from chamber to chamber, often through one or many apertures; hence the name Foraminifera. The shell-wall is also frequently perforated with minute holes, through which the sarcode can be protruded as *pseudopodia*. Some of the shells are hyaline, others opaque, and both of these are sometimes sandy. Of the Hyaline group, (1) *Nodosaria* [or Specimens A 1—A 4], (2) *Polymorphina* [or Specimen A 5], (3) *Rotalia* [or Specimens A 6—A 25], and (4) *Globigerina* [or Specimens A 26—A 40], may be taken as the characteristic types. The *Miliolites* are the chief of the other section (5), or opaque foraminifers [Specimens A 41—A 57].

The Foraminifera are widely distributed, occurring in both shallow and deep seas, and presenting innumerable varieties, according to the nature of the habitat. They are present in very many of the stratified deposits, ranging upwards from the Palæozoic series; throughout these long periods they appear to have presented the same forms and varieties as at the present day.

Genus *Lagena*, Walker ; and the allied Genus, *Entosolenia*.A 1. Several varieties of *Lagena* and *Entosolenia*.

Hab. From the North British coast ; and fossil, from Nene Valley.

Genus *Nodosaria*, Lam.A 2. *Nodosaria Radicula*, Linn. sp.

Ref. Encycl. Méthod. pl. 465. fig. 4.

Hab. North British coast.

This tablet also contains specimens of *Dentalina communis* and *Polymorphina communis*.

A 3. *Nodosaria Raphanistrum*, Linn. sp. (and its variety, *Dentalina elegantissima*, d'Orb.).

Ref. Dict. des Sci. Nat. Zool. pl. 13. fig. 4. (*N. bacillum*, DeFrance).

Hab. Tertiary clay, Malaga, Spain.

This tablet contains also *Dentalina communis*, d'Orb., and a variety of *Nodosaria* (= *Dimorphina tuberosa*, d'Orb.).

Genus *Nodosaria*, Lam., Subgenus, *Dentalina*, d'Orb.A 4. *Dentalina communis*, from the British coast. See also Tablets A 2 and A 3.

Ref. Ann. des Sci. Nat. vol. vii. p. 254.

Genus *Polymorphina*, d'Orb.A 5. *Polymorphina communis*, d'Orb. See also Tablets A 2 and A 29.

Ref. Ann. Sci. Nat. vol. vii. p. 266.

Hab. Coasts of Britain.

Genus *Polytrema*, Risso.A 6. The *Polytrema miniacea*, Esper, sp.

Ref. Esper, Zoophyt. 1. pl. 17 ; Risso, Europe Mérid. vol. v. p. 340. No. 91 ; Blainville, Actinolog. p. 410. pl. 67. fig. 4.

Hab. From the ' Giant Clam ' (*Chama gigas*), Indian Ocean.

A 7. The *Polytrema miniacea*, Esper, sp., on a specimen of *Oculina*, and also attached to a Nullipore. With a *Carpenteria*. (See also A 58.)

Hab. Feejee, and Philippine Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *Rotalia*, Lamarck.

- A 8. *Rotalia inflata*, Williamson.
Ref. Williamson's Monograph, p. 50. pl. 4. figs. 93, 94.
Hab. Alluvial clay, near Peterborough.
- A 9. *Rotalia repanda*, Fichtel and Moll, sp.
Ref. Ficht. und Moll, Test. Microsc. pl. 3. fig. *a—d*.
Hab. Sixty fathoms, forty miles S. of Scilly Islands.
- A 10. *Rotalia rosea*, d'Orb. sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 272.
Hab. West Indies, on the *Strombus gigas*.
- A 11. *Rotalia Beccarii*, Linn. sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 275.
Hab. Coast sand, West Indies.
- A 12. *Rotalia Beccarii*, Linn. sp.
Hab. Fossil, Nene Valley.
On the same tablet are specimens of the *Rotalia globularis*, d'Orb.
- A 13. Five specimens of *Rotalia vesicularis*, Lam. sp. (= *R. Gervillii*, d'Orb.)
Ref. Ann. des Sci. Nat. vol. vii. p. 274.
Hab. From the coast sand of Australia.

Genus *Calcarina*, d'Orb.

- A 14. Specimens of *Calcarina Spengleri*, Ficht. and Moll, sp.
Ref. Ficht. und Moll, Test. Microsc. p. 84. pl. 14. fig. *d—i*, and pl. 15.
Hab. On the Clam-shell, Indian Seas.
- A 15. Specimens of *Calcarina Spengleri*, Ficht. and Moll, sp.
Hab. From the reef of Rewa, Feejee Islands.
With this is a *Siderolina* (?). Presented by Capt. Sir E. Home, Bart., R.N.

Genus *Asterigerina*, d'Orb.

- A 16. Two specimens of *Asterigerina*, from a Clam-shell.
Hab. Indian Ocean.

Genus *Amphistegina*, d'Orb.

[For the allied genera *Nummulites* and *Orbitoides*, see Catalogue of Invertebrata, 1856, p. 238.]

- A 17. A species of *Amphistegina gibbosa*, d'Orb. See also Tablet A 54.
Ref. Ann. des Sci. Nat. vol. vii. p. 304.
Hab. On a Clam-shell, East Indies.

Genus *Operculina*, d'Orb.

- [A 19.] *Operculina complanata*, Basterot, sp. Specimen of small growth. See Tablet A 19.
Ref. Ann. des Sci. Nat. vol. vii. p. 281.
Hab. North British coast.

Genus *Nonionina*, d'Orb.

- A 18. *Nonionina asterizans*, Fichtel and Moll, sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 294.
Hab. Southend.
- A 19. *Nonionina crassula*, Montagu, sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 294.
Hab. North British coast.
 The same tablet contains *Nonionina communis* and *Operculina complanata*.

Genus *Polystomella*, Lam.

- A 20. *Polystomella crispa*, Linn. sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 283 ; Trans. Micr. Soc. vol. ii. p. 159.
Hab. Coast sand, Australia.
- A 21. *Polystomella crispa*, Linn. sp.
Hab. Sea-weed, British Channel and Scarborough, and fossil from Nene Valley. *Presented by Prof. W. C. Williamson.*
- A 22. *Polystomella crispa*, Linn. sp., var. *striatopunctata*, Ficht. and Moll.
Ref. Ann. des Sci. Nat. vol. vii. p. 294.
Hab. Honduras. *Presented by George Shadbolt, Esq.*

Genus *Cristellaria*, Lam.

- A 23. *Cristellaria Calcar*, Linn. sp.

Ref. Ann. des Sci. Nat. vol. vii. p. 291.

Hab. 250 fathoms, N.W. of Crete. Dredged by Capt. T. Spratt, R.N.

The same tablet contains *Uvigerina pygmæa*, d'Orb., and a *Rotalia*.

- A 24. *Cristellaria Calcar*, Linn. sp.

Hab. Ninety fathoms, Archipelago, near Syra. Dredged by Capt. T. Spratt, R.N.

- A 25. *Cristellaria Calcar*, Linn. sp.

Hab. Fossil, tertiary clay, Malaga, Spain.

On this tablet are also specimens of *Clavulina communis*, d'Orb., *Sphæroidina bulloides*, d'Orb., and a flat variety of *Planorbulina Mediterranensis*, d'Orb. See also Tablets A 28—A 33, and A 37.

Genus *Orbulina*, d'Orb.

- A 26. *Orbulina universa*, d'Orb.

Ref. Foram. Foss. Bassin Vienne, p. 22. pl. 1. fig. 1.

Hab. From 250 fathoms, N.W. of Crete. Dredged by Capt. T. Spratt, R.N.

Globigerina bulloides, d'Orb., is on the same tablet. See also Tablet A 27.

Genus *Globigerina*, d'Orb.

- A 27. *Globigerina bulloides*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 277.

Hab. Deep sea, Crete. Dredged by Capt. T. Spratt, R.N.

On the same tablet is the *Orbulina universa*. See also Tablet A 26.

Genus *Planorbulina*, d'Orb.

- A 28. A species of *Planorbulina*.

Hab. Coast sand, West Indies.

A 29. *Planorbulina Mediterranensis*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 280.

Hab. Fossil, Nene Valley.

Presented by Prof. W. C. Williamson.

On the same tablet are specimens of *Spiroloculina depressa* and *Polymorphina communis*.

A 30. A series of specimens of *Planorbulina Mediterranensis*, d'Orb., var. (= *Acerulina*, Schultze), from the Clam-shell.

Hab. Indian Ocean.

A 31. Specimens of *Planorbulina Mediterranensis*, d'Orb., var., from the Clam-shell.

Hab. Indian Ocean.

A 32. Five specimens of *Planorbulina Mediterranensis*, d'Orb., from the *Strombus gigas*.

Hab. West Indies.

A 33. Variety of *Planorbulina* (= *Truncatulina lobatula*, d'Orb.).

Hab. Sixty fathoms, forty miles south of Scilly Islands.

Genus *Cassidulina*, d'Orb.A 34. *Cassidulina lævigata*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 282.

Hab. Coast of Norway. Dredged by Messrs. MacAndrew and Barrett.

Genus *Valvulina*, d'Orb.A 35. *Valvulina triangularis*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 270.

Hab. Coast sand, Australia.

A 36. *Valvulina triangularis*, d'Orb. (= *Clavulina tricarinata*, d'Orb.).

Ref. Ann. des Sci. Nat. vol. vii. p. 270.

Hab. On a Clam-shell, Indian Ocean.

Polytrype elongata is on the same tablet.

Genus *Clavulina*, d'Orb.

[A 25.] Specimens of *Clavulina communis*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 268.

Hab. Fossil, tertiary clay, Malaga. See Tablet A 25.

Genus *Bulimina*, d'Orb.

A 37. A series of *Bulimina marginata*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 269.

Hab. From the North British coast.

There is *Placopsilina Canariensis* on the same tablet.

Genus *Uvigerina*, d'Orb.

A 38. *Uvigerina pygmæa*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 269.

Hab. Ninety fathoms, Archipelago, near Syra. Dredged by Capt. T. Spratt R.N.

Genus *Textularia*, Defrance.

A 39. A species of *Textularia Sagittula*, Defrance, var. *agglutinans*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii. p. 263.

Hab. Coast sand, Australia.

A 40. A species of *Textularia Sagittula*, Defrance, var. *agglutinans*, d'Orb.

Hab. Sixty fathoms, south of Scilly Islands. Dredged by Messrs. MacAndrew and S. P. Woodward.

Genus *Cornuspira*, Schultze.

[A 41.] *Cornuspira foliacea*, Philippi, from a Clam-shell. See Tablet A 42.

Ref. Williamson's Monograph, pl. 7. fig. 199—201; Schultze, Organ. Polythalam. p. 41.

Hab. Indian Sea.

Genus *Hauerina*, d'Orb.

- A 41. A specimen of *Hauerina compressa*, d'Orb.

Ref. Foss. Foram. Bassin Vien. p. 119. pl. 5. fig. 25—27.

Hab. On the Clam-shell, India.

This tablet contains also *Cornuspira foliacea* and a sandy spiriline *Placopsilina*.

Genus *Vertebralina*, d'Orb.

- A 42. A specimen of *Vertebralina striata*, d'Orb.

Ref. Ann. des Sci. Nat. vol. vii p. 283.

Hab. On the Clam-shell, India.

The tablet contains also *Spiroloculina depressa*.

Genus *Sphæroidina*, d'Orb.

- [A 25.] Three specimens of *Sphæroidina bulloides*, d'Orb.

Hab. Tertiary clay, Malaga. See Tablet A 25.

Genus *Miliola*, Lamarck.

- A 43. Specimens of *Miliola* (= *Biloculina depressa*, d'Orb.).

Hab. Isle of Arran.

- A 44. Specimens of *Miliola* (= *Biloculina bulloides*, d'Orb.).

Hab. Scarborough.

Presented by W. Bean, Esq.

- A 45. A species of *Miliola* (= *Triloculina inflata*, d'Orb.).

Hab. Coast sand, Australia.

- A 46. A species of *Miliola* (= *Quinqueloculina Seminulum*, Linn. sp.).

Hab. Coast sand, West Indies.

- [A 29, A 42.] Specimens of *Miliola* (= *Spiroloculina depressa*, d'Orb.). See Tablets A 29 and A 42.

Hab. British coasts, Indian Sea, &c.

Genus *Amorphina*, Parker, MS.

- A 47. A series of *Amorphina variabilis*, Parker, MS.

Hab. Coast sand, Australia.

Genus *Orbitolites*, Lam.

[For fossil specimens of *Orbitolites*, see Catalogue of the Invertebrata, 1856, p. 239.]

- A 48. The *Orbitolites complanatus*, Lam.

Ref. Carpenter, Phil. Trans. vol. cxlvi. p. 181. pl. 4—9.

Hab. Eagle-hawk-neck, Port Arthur, Van Diemen's Land.

Presented by Capt. Sir E. Home, Bart., R.N.

- A 49. Two series of the young individuals of *Orbitolites complanatus*, Lam., from the margin of a larger specimen.

Hab. Rewa, Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- A 50. Two series of *Orbitolites complanatus*, Lam.

Hab. From the reef of Rewa, Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- A 51. A series of *Orbitolites complanatus*, Lam.; large and small.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- A 52. Ten specimens of *Orbitolites complanatus*, Lam.

Hunterian.

Genus *Polytrype*, Defrance.

- [A 36.] *Polytrype elongata*, Defrance. See Tablet A 36.

Ref. Dict. Sc. Nat. vol. xlii. p. 453. pl. 48. fig. 1.

Hab. Clam-shell, Indian Ocean.

Genus *Orbiculina*, Lam.

- A 53. Two specimens of *Orbiculina Orbiculus*, Ficht. and Moll, sp.

Ref. Nautilus, Ficht. und Moll, Test. Microscop. p. 115. pl. 23.

Hab. Honduras.

Presented by G. Shadbolt, Esq.

- A 54. A series of specimens of *Orbiculina Orbiculus*, Ficht. and Moll, sp.
Hab. South Sea. Collected by Lieut. Chimmo.

Genus *Peneroplis*, Montfort.

- A 55. Specimens of *Peneroplis planata*, Ficht. and Moll, sp.
Ref. Ann. des Sci. Nat. vol. vii. p. 285.
Hab. From the coast sand of the West Indies.
- A 56. *Peneroplis planata*, Ficht. and Moll, sp.
Hab. The reefs, Rewa, Feejee Islands.
 The same tablet contains *Amphistegina gibbosa*. See also Tablet A 17.
Presented by Capt. Sir E. Home, Bart., R.N.

Genus *Alveolina*, d'Orb.

- A 57. A series of *Alveolina Boscii*, DeFrance.
Ref. Ann. des Sci. Nat. vol. vii. p. 306.
Hab. South Sea. Collected by Lieut. Chimmo.

Genus *Placopsilina*, d'Orb.

- [A 37.] *Placopsilina Canariensis*, d'Orb. A very variable form. See Tablet A 38.
Ref. Ann. Nat. Hist. ser. 2. vol. xix. p. 301.
Hab. The North British coast.
- [A 41.] A specimen of a minute sandy discoidal *Placopsilina*, from a Clam-shell.
 See Tablet A 42.
Hab. Indian Sea.

Genus *Carpenteria*, Gray.

This is a peculiar and newly-discovered form of Rhizopod; it is tent-like, or like a small barnacle, and fixed by the base; the frame is calcareous and basket-like, boldly perforate and containing the sarcode, which Dr. Gray considers to have been full of spicules. It appears to form a link between the Foraminifera and the Sponges. See Ann. Nat. Hist. 3rd ser. vol. ii. p. 384.

A 58. A species of *Carpenteria* on the valve of *Chama gigas*.

Hab. Indian Ocean.

Hunterian.

[A 7.] *Carpenteria* on *Oculina*, with *Polytrema miniacea*.

Hab. South Sea.

Presented by Capt. Sir E. Home, Bart., R.N.

The specimens of Foraminifera in the above Catalogue, with the exception of those to which the names of Donors are attached, have been presented by Mr. W. Kitchen Parker, who selected and prepared them from fossil and recent specimens, as illustrations of this Family.

[The Numbers in Brackets refer to Tablets on which specimens of more than one species are arranged.]

C A T A L O G U E.

R E C E N T I N V E R T E B R A T A.

Class II. PORIFERA—SPONGES.

THE Porifera are organized bodies presenting a great variety of form, permanently rooted and attached to foreign bodies, whether fixed, floating, or encrusting with their substances various submarine objects, or burrowing into the interstices of shells or other calcareous bodies.

The structure of the skeleton is various, being fibrous, fibro-corneous, calcareous or siliceous; some are composed of a fibro-corneous axis, having the fibres interlaced in every direction, and which are in some cases strengthened by variously formed siliceous or calcareous substances termed spicula. This skeleton is externally coated with membranous or sarcodous matter, consisting of aggregated cells, which outer coating is perforated by pores and oscula, being the incurrent and excurrent canals.

In other forms the external coating is crustaceous or coriaceous, and principally composed of spicula, as in *Tethya*, or of a dense layer of rounded or oval siliceous bodies, termed *Gemmules*, as in *Geodia* and *Pachymatisma*, these coatings being also perforated by oscula

All the Porifera are aquatic, and with few exceptions marine, and are widely distributed over all parts of the globe.

Genus SPONGIA.

Skeleton keratose. Fibre cylindrical, solid.

DIVISION I.

In this division of the Spongiadæ the fibre is covered by a thin keratose sheath, which is sometimes, but not always, to be detected. The fibre is not furnished with spicula, either within or without, excepting occasionally in the large flattened radial fibres, in the middle of which are occasionally imbedded grains of sand or fragments of spicula of various forms. In the different species comprised in this genus, there is great variety in the size and amount of rigidity of the fibre.

B 1. A series of specimens of the Common or Officinal Sponge, *Spongia officinalis*, Linn. ; of the variety known as the best Turkey.

Fig. Phil. Trans. 1855. p. 288, tab. 10. fig. D. E.

Hab. Mediterranean. Archipelago.

Purchased.

B 2. A small cup-shaped specimen of Officinal Sponge, *Spongia officinalis*, Linn. The oscula are well seen on the inner surface.

B 3. A small specimen of cup-shaped Sponge, *Spongia officinalis*, Linn., still attached to the rock on which it grew : nearly the whole of the internal surface is occupied with large oscula.

Purchased.

B 4. A nodulated specimen of Sponge still attached to the rock upon which it grew ; it is of the kind known as Fine Turkey.

Hab. Smyrna.

Presented by J. C. Wordsworth, Esq., F.R.C.S.E.

B 5. A stalked specimen of Fine Turkey Sponge attached to a mass of rock. It is very much like a goblet in shape, and numerous large oscula may be seen on the bottom and sides of its cup-like cavity.

Hab. Smyrna.

Presented by J. C. Wordsworth, Esq., F.R.C.S.E.

- B 6. A specimen of Sponge, *Spongia officinalis*, Linn., of the variety known as Fine Turkey, still attached to the rock upon which it grew. It is in the form of a double cup, and has two sets of large oscula separated from each other by a well-marked septum. *Presented by J. Ladley, Esq.*
- B 7. A large specimen of Officinal Sponge, *Spongia officinalis*, Linn.; it is cup-shaped, and in its unexpanded state measures ten inches in diameter; several large apertures occur at the base, but the large oscula are situated on the internal surface, where they occur in parallel rows. *Purchased.*
- B 8. A specimen of Sponge, *Spongia officinalis*, Linn., of the variety known as Fine Turkey. It is of pyramidal figure, flattened on two of its surfaces, which are covered with oscula of nearly uniform size. The upper thin edge exhibits larger oscula, some of which are on an average one-half of an inch in diameter. *Purchased.*
- B 9. A small Sponge, *Spongia officinalis*, Linn., known as the Turkey brown; it is attached to the valve of a *Spondylus*; its fibres are much stiffer and coarser than those above described. *Purchased.*
- B 10. A small Sponge, known as Turkey brown or hard Turkey: the large oscula are principally confined to the upper surface. *Purchased.*
- B 11. A similar specimen, in which the large oscula are very few in number, and principally confined to the upper concave surface. *Purchased.*

DIVISION II.

Sponges of the variety known as the Turkey Honeycomb.

- B 12. A specimen of Officinal Sponge, *Spongia*, of the variety known as the Turkey Honeycomb. Immediately upon its removal from the sea it was placed in spirit; it is attached to the rock on which it grew, and the fleshy coating is entirely preserved.

Fig. Quekett, MSS.

Hab. Mediterranean Sea. Smyrna.

Presented by Dr. A. Leared, 1856.

- B 13. A specimen of Officinal Sponge, *Spongia*, of the variety known as the Turkey Honeycomb. It is attached to the rock on which it grew, and has been dried, so that the horny skeleton only is preserved.

Purchased.

- B 14. A specimen of Officinal Sponge, *Spongia*, of the variety known as the Turkey Honeycomb. It is of semicircular form, and the oscula are confined to the upper surface.

Purchased.

- B 15. A large specimen of Sponge of the Turkey Honeycomb variety, in which the oscula are well shown.

Hab. Smyrna.

Presented by J. T. Streatfeild, Esq., M.R.C.S.E.

- B 16. Four specimens of Officinal Sponge, of the Turkey Honeycomb variety; two of them have been cleaned and show the oscula exceedingly well, but one contains so large an amount of foreign matter, that it is said to lose upwards of 75 per cent. in cleaning.

Purchased.

DIVISION III.

Bahama Sponges.

- B 17. A small specimen of the best Bahama or West Indian Sponge; it is composed of stiff horny fibres of small size.

Purchased.

- B 18. A specimen of Bahama Sponge of the second quality; it is of a much brighter yellow colour than the preceding, but abounds in shelly and sandy matter; the fibre is stiff and horny.

Purchased.

- B 19. A specimen of Bahama Sponge of the third quality; it is of a richer yellow colour than the preceding specimens, and the fibres are much larger and stiffer.

Purchased.

- B 20. Two specimens of Bahama Sponge, termed Bahama refuse; both are of a much lighter colour than the preceding, but the fibres, although smaller, are so stiff and brittle that they can hardly be used for domestic purposes.

Purchased.

- B 21. A series of Sponges in which the horny fibre is more or less flexible, and on this account are used in domestic purposes ; they are at present in the condition in which they were imported, and some of the specimens contain as much as 75 per cent. of shelly and sandy matter. *Purchased.*
- B 22. A Sponge, *Spongia spicata* ; it is of circular figure, and on the upper convex surface the horny skeleton is raised into a series of pointed processes, in the centre of each of which is a large osculum.
Hab. Raitea. *Purchased.*
- B 23. A flattened oval Sponge, convex on its upper and concave on its under surface ; the former is of a light colour, and exhibits a few large oscula of circular figure, whilst the latter is of a rich brown. The fibres are remarkable for their large size and extreme stiffness. *Purchased.*

DIVISION IV.

Sponges allied to the genus Spongia, but differing from them slightly in the nature of their skeleton.

- B 24. A root-like specimen of Sponge, presenting the appearance of a Gorgonia ; the branches are sometimes tuberculate and very irregularly forked ; the tissue is compact and without spicula.
Hab. Southern Seas. *Presented by Prof. Busk, F.R.S.*
- B 25. A small specimen of Sponge, having its outer surface covered with a series of short bifurcating processes. It is allied to *Spongia*, and is composed of two sorts of horny fibres, with few, if any, spicula ; many of the fibres are remarkable for their granular appearance externally.
Hab. Australia. *Purchased.*
- B 26. A small delicate Sponge attached to a Nullipore ; it is composed of very transparent horny fibres without any spicula.
Hab. Locality unrecorded.
Presented by Captain Sir E. Home, Bart., R.N.

- B 27. A small branched Sponge, attached to the valve of a shell (*Arca*). It is composed of horny fibres of various sizes, much convoluted, and all the larger ones filled with spicula.

Hab. Locality unrecorded.

Purchased.

DIVISION V.

Fistulose Sponges.

- B 28. A small specimen of fistulose Sponge, consisting of six tubes connected at their bases, and four of them joined laterally. The tubes are about four inches in length, and half an inch in diameter. When examined microscopically, the structure is found somewhat to resemble those of a true *Spongia*, but the fibres are of two kinds, one coarse and granular, the other more delicate and containing minute bi-acicular spicula.

Hab. South Seas.

Purchased.

- B 29. A specimen of fistulose Sponge, consisting of twelve tubes, all of which are united at their bases, and the greater part of them laterally; two sets of them have so far coalesced, that what were originally three cavities now form only one. The general character of the Sponge is like that of the preceding specimen, and the microscopic structure also agrees with it, the fibres being wavy or granular, or containing minute bi-acicular spicula.

Hab. Australia.

Purchased.

- B 30. A portion of a Sponge of the same species, in which only three tubes are preserved; they are upwards of ten inches in length, and about three-quarters of an inch in diameter, their minute structure being horny and spiculoid, as in the preceding specimen.

Hab. Australia.

Purchased.

- B 31. A fistulose Sponge consisting of twelve tubes, varying from six to ten inches in length; the external surface is spinous, the internal smooth, and some of the tubes are firmly joined to the neighbouring tubes, and the two cavities have become one. When examined microscopically, the

smooth surface is found to be made up of horny fibres of various sizes, all the larger ones containing very minute spicula, whilst the internal structure is composed of larger fibres, having a minutely granular appearance.

Hab. Australia.

Purchased.

- B 32. A smaller specimen of the same Sponge, in which there are five tubes united by their bases, and two laterally. The external surface is tuberculated, the inner perfectly smooth.

Hab. Australia.

Purchased.

- B 33. Two specimens of a delicate tubular Sponge of conical figure, having constrictions at intervals of an inch, and appearing as if they had been tied round with a cord when in a soft condition. About one-half the circumference of each specimen has the fibre loose and open, whilst the remaining portion is fine and compact. When examined microscopically, they are found to be made up entirely of solid horny fibres, those on the exterior being of small size, whilst the internal ones are nearly as large as those of certain species of *Verongia*. The cavity does not extend the entire length of either of the specimens, both being solid at their base, whilst at the free extremity or mouth they are smoothly rounded off.

Hab. Locality unrecorded.

Presented by John Quekett.

DIVISION VI.

Sponges of more or less pyriform shape, and composed of thick solid horny fibres, more or less abounding in fragments of spicula and silex.

- B 34. A series of specimens of coarse Sponge, all of which are more or less of pyriform shape, and have a central cavity about half an inch in diameter, running almost completely through them; into this cavity the principal oscula open. When examined microscopically, the fibres are found to be of large size, solid, and to contain numerous spicula and fragments of spicula within them.

Hab. Australia.

Purchased.

- B 35. Two specimens of Sponge, with the fibres of large size, and loosely reticulated : numerous portions of twigs of plants are interspersed amongst the fibres, and in the smaller specimen these twigs are arranged in a radiated manner. When examined microscopically, the fibre is found to be of large size, solid, and abounding in spicula or fragments of silex.
Hab. Australia. *Purchased.*
- B 36. A small specimen of Sponge, probably of the same species, firmly imbedded in a mass of rock composed of fragments of nullipores and corals. It is made up of strong parallel fibres, connected by transverse bands. All the larger fibres are solid and laminated, but each has a row of fragments of spicula imbedded in its substance. Some of the fibres are so much thickened that they have coalesced with neighbouring fibres ; and the only indication of the transverse bands is a small oval opening, surrounded by laminæ.
Hab. Australia. *Purchased.*
- B 37. A small Sponge, of irregular pyriform figure, with a round concavity of attachment at its base. The central cavity is well shown, as its margins are raised, and surrounded by stiff fibres. When examined microscopically, the fibres are found to be solid and granular, or filled with numerous spicula and particles of silex.
Hab. Australia. *Purchased.*
- B 38. A larger specimen of probably the same species of Sponge, in which the fibres are coarser, but in which the central cavity is surrounded by a raised border of stiffened fibres, connected by a hexagonal network. When examined microscopically, the fibres, although of considerable size, are solid and without spicula.
Hab. Australia. *Purchased.*
- B 39. A specimen of Sponge of conical figure, made up of coarse, stiff fibres compactly arranged. Two or three small cavities exist in the centre, but do not extend the entire length of the Sponge. When examined microscopically, the fibres are found to be solid, and to contain numerous spicula imbedded in them.
Hab. Locality unknown. *Purchased.*

- B 40. A cup-shaped Sponge, tuberosely externally, supported upon a long tapering stem, with a bifurcating base of attachment. The fibres of which it is composed assume a quadrangular arrangement, and the oscula are somewhat regularly distributed over the inner surface, except near the margin. When examined microscopically, the fibres will be found to be composed of horn, solid, of small size, and to contain fragments of minute spicula.

Hab. Holdfast Bay, near Adelaide, Australia.

Presented by John Quekett.

- B 41. An expanded mass of Sponge with rather coarse fibre, and exhibiting on its outer edge a fissure, as though it at one time had been cup-shaped. It is composed, when examined microscopically, of large, solid fibres, containing fragments of numerous spicula.

Hab. Australia.

DIVISION VII.

Sponges in which the fibre is large and tubular.

Genus VERONGIA.

- B 42. A portion of Sponge made up entirely of the reticulations of a brown horny fibre of large size ; the reticulations are disposed in such a manner as to form a series of nearly equal-sized hexagonal cells.

Fig. Hist. Cat. vol. i. prep.

Hab. Locality unrecorded.

Hunterian.

This specimen represents on an enlarged scale a section of human lung injected and dried ; the cells above alluded to corresponding to the air-cells, and the reticulated fibres to the capillaries on their walls. As this preparation was found with numerous others, evidently belonging to the late Mr. Ellis, it is not improbable that it may be the identical one represented in Plate 54, fig. 1.

- B 43. A long tubular specimen of Sponge with coarse fibre, and of a dark brown colour ; one side of the tube has been injured, and its walls will be

seen to be half an inch in thickness ; the network is very open, the fibres tubular, and contain black matter in their interior.

Hab. Locality unrecorded. *Hunterian.*

- B 44. A tubular Sponge of a bright yellow colour ; it is made up of coarse horny fibres, having a granular exterior and spiculoid masses within them. The diameter of the tube is about one inch, the thickness of the walls exceeding half an inch. When examined microscopically, the fibre is found to be of large size, tubular, and without spicula.

Hab. Locality unrecorded. *Hunterian.*

- B 45. A portion of horny Sponge with very thick fibres ; it is of a light yellow colour, and traversed by a tube about three-quarters of an inch in diameter. The fibres are transparent, and have a central tubular cavity occupied with dark pigment.

Hab. Locality unrecorded. *Hunterian.*

- B 46. A fragment of Sponge made up of an hexagonal network of stiff horny fibres, which on microscopic examination exhibit a central cavity occupied with dark pigment, as in the preceding specimen.

Hab. Locality unrecorded. *Hunterian.*

- B 47. An expanded and somewhat digitate Sponge, of coarse loose fibre, consisting of long tubes extending throughout the substance, generally coalesced, but sometimes separate at their apices. When examined microscopically, it is found to be composed of horny fibres, traversed by an irregular tubular cavity.

Hab. Australia. *Presented by John Quekett.*

Genus SPONGILLA, Lam.

Sponge homologous, polymorphous, latticed and imperfectly cellular, the cells bounded by unequal fibres, composed of siliceous spicula laid in a translucent gelatine ; interstices filled with an organic granuliferous mucus ; spicula acicular, simple ; pores and oscula ill-defined : oviform capsules or sphærulæ are generated at certain seasons in the cells. Colour, a shade of green. Lacustrine or fluviatile.

- B 48. *Spongilla fluviatilis*, Pall. On the under surface the gemmules may be seen.
Fig. British Sponges, Johnston, p. 159, pls. 17, 18.
Hab. Commercial Docks, Rotherhithe.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 49. *Spongilla lacustris*, Flem.
Fig. British Sponges, Johnston, p. 162.
Hab. Maidenhead, River Thames.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 50. *Spongilla lacustris*, Flem. It shows union after fracture.
Hab. Paddington Canal. *Presented by T. H. Stewart, Esq.*
- B 51. *Spongilla lacustris*, Flem. Before sending out its elongated processes.
Hab. Paddington Canal. *Presented by T. H. Stewart, Esq.*
- B 52. *Spongilla lacustris*, Flem.
Hab. India. *Presented by Charles Stokes, Esq., F.R.S.*
- B 53. A portion of the above specimen in fluid, showing the gemmules.
Presented by Charles Stokes, Esq., F.R.S.
- B 54. *Spongilla reticulata*, Bowk.
Hab. Margins of the Amazon. Virgin forest. When the waters have receded, the sponge is found clinging to the small dependent branches of the trees. *Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.*
- B 55. A large specimen of freshwater Sponge, *Spongilla coralloides*, Bowk. It is almost wholly composed of curved siliceous spicula.
Fig. Bowk. and Quek. MSS.
Hab. The river Uruguay, Salto grande, South America.
Presented by W. Bragge, Esq.
- B 56. Portions of *Spongilla coralloides*, Bowk., showing the large size of the oscula.
Presented by W. Bragge, Esq.

Genus HALICHONDRIA, Fleming.

Body multiform, more or less spongy and elastic, often friable when dried, permeated by canals opening by oscula on the surface, composed of fibro-corneous and siliceous threads woven into an irregular network, or of siliceous spicula variously crossed and netted together by a gelatinous cement ; surface porous, usually more compact in texture than the interior, and not slimy : spicula simple, crystalline. Marine.

B 57. The *Halichondria oculata*, Pall.

Fig. British Sponges, Johnston, p. 94. pl. 3.

Hab. Coast of Devon, in 40 fathoms.

Presented by T. H. Stewart, Esq.

B 58. A series of specimens of *Halichondria oculata*, Johnston.

Fig. British Sponges, Johnston, p. 94. pl. 3.

Hab. British coast.

Purchased.

B 59. The *Halichondria spinosa*, Bowk. Attached to a species of Pholas.

Fig. Bowk. MSS.

Hab. Australia.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

B 60. A coarse branched Sponge, like the *Halichondria spinosa* ; the spicula project from the branches.

Hab. Australia.

Presented by John Quekett.

B 61. The *Halichondria hispida*, Flem. In various stages of growth.

Fig. British Sponges, Johnston, p. 98.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

B 62. The *Halichondria panicea*, Johnston. *H. papillaris*, Flem.

Fig. British Sponges, Johnston, p. 114. pls. 10. and pl. 11. f. 5. Flem.

Brit. Anim. 520.

Hab. South coast of England.

Purchased.

B 63. The *Halichondria panicea*, in its mammillary and papillary condition.

Presented by T. H. Stewart, Esq.

- B 64. The *Halichondria panicea*. In fluid. Prepared by Mr. H. Goadby.
- B 65. The *Halichondria seriata*, Grant, encrusting a stone.
Fig. British Sponges, Johnston, p. 125. pl. 14. f. 2.
Hab. Tenby, South Wales.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 66. The *Halichondria seriata*, encrusting the stem of *Laminaria digitata*.
Presented by T. H. Stewart, Esq.
- B 67. The *Halichondria suberea*, Johnston.
Fig. British Sponges, Johnston, p. 139. pl. 12. f. 5, 6.
Hab. Tenby, South Wales.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 68. The *Halichondria suberea*, enclosing an *Anserina pes-Pelecani*, and exhibiting a cavity in which a Hermit Crab was located.
Presented by T. H. Stewart, Esq.
- B 69. The *Halichondria ramosa*, Johnston.
Fig. British Sponges, Johnston, p. 99.
Hab. Hastings. Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 70. The *Halichondria infundibuliformis*, Johnston.
Fig. British Sponges, Johnston, p. 105. pl. 6. f. 3.
Hab. Shetland, 70 fathoms.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 71. A young specimen of the same species from the same locality to contrast with the adult form.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 72. An unknown species of *Halichondria*, Bowk.
Fig. Bowk. MSS.
Hab. Feejee Islands. Presented by Captain Sir E. Home, Bart., R.N.

- B 73. A sponge closely allied to *Halichondria oculata* of Johnston.
Fig. Bowk. MSS.
Hab. Feejee Islands. *Presented by Captain Sir E. Home, Bart., R.N.*
- B 74. The *Halichondria sanguinea*, Johnston.
Fig. British Sponges, Johnston, p. 134. pl. 14. f. 3.
Hab. Hastings. *Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.*
- B 75. The *Halichondria fruticosa*, Flem.
Fig. British Sponges, Johnston, p. 103. pl. 14. f. 1.
Hab. Plymouth, in 50 fathoms. It presents a tubular character, the tubes being about one inch in diameter.
Presented by T. H. Stewart, Esq.
- B 76. The *Halichondria fruticosa*, Flem.
Hab. Plymouth Sound. This specimen differs from the preceding in the processes not being tubular. *Presented by T. H. Stewart, Esq.*
- B 77. The *Halichondria fruticosa*, Flem. The Sponge surrounds a portion of the polypidom of *Gorgonia verrucosa*.
Hab. Plymouth. *Presented by T. H. Stewart, Esq.*
- B 78. The Sea Fan-Sponge, *Halichondria ventilabrum*, Flem. It is of small size, not exceeding an inch in height, and in the form of a funnel.
Fig. Johnston, British Sponges, pl. 7. p. 107.
Hab. Deep water on Scottish, Irish and English coasts.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 79. A specimen of *Halichondria ventilabrum*, Flem. It is of a funnel-shape, and six inches in diameter.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.
- B 80. Another specimen of *Halichondria ventilabrum*, Flem. It is of a semi-funnel-shape, and measures twenty-eight inches in circumference.
Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

- B 81. A specimen of *Halichondria ventilabrum*, Flem. It is quite flat and fan-shaped, a smaller fan being developed from the same stalk.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

- B 82. A small fan-shaped specimen of *Halichondria ventilabrum*, Flem.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

Cup-shaped Sponges belonging to the genus HALICHONDRIA.

- B 83. A small Cup-shaped Sponge belonging to the genus *Halichondria*. It has very thick walls, and most of the fibres are densely crowded with spicula.

Hab. Singapore.

Presented by John Quekett.

- B 84. A Cup-shaped Sponge of the same species of *Halichondria*. It is of rather larger size, and has a slight development of a stalk.

Hab. Singapore.

Presented by John Quekett.

- B 85. A Cup-shaped Sponge of the same species of *Halichondria*. It is larger than the preceding specimen, and of more irregular figure externally, there being two large cavities in which shells appear to have been imbedded.

Hab. Singapore.

Presented by John Quekett.

- B 86. A Cup-shaped Sponge of the same species of *Halichondria*, in which the cavity is five inches in depth and reaches nearly to the bottom, which is not the case in either of the other specimens. This sponge is exceedingly soft and fragile, in consequence of its having been soaked for a short time in fresh water.

Hab. Singapore.

Presented by John Quekett.

- B 87. A Cup-shaped Sponge of the same species of *Halichondria*. The external surface is marked with numerous furrows, some of which are nearly three inches deep. The internal surface or cup is exceedingly smooth, and measures about four inches in depth.

Hab. Singapore.

Presented by John Quekett.

Sponges allied to those of the genus HALICHONDRIA.

- B 88. A flattened portion of Sponge with numerous papillary projections, each having an osculum of large size at its free extremity ; the fibre is small and transparent, forming a beautiful radiated network. All the larger fibres contain numerous acicular spicula arranged in parallel rows, whilst in the smaller ones a single row only is present.
Hab. Locality unrecorded. *Purchased.*
- B 89. A smaller specimen of Sponge, in which the projections are much more blunt, and covered with numerous oscula on one surface only. The fibre is even more delicate than that of the preceding specimen, and all the larger ones are completely filled with very minute bi-acicular spicula.
Hab. Locality unrecorded. *Purchased.*
- B 90. Two small specimens of Sponge, probably of the same species, the entire fibrous network of which abounds in very minute bi-acicular spicula.
Hab. Locality unrecorded. *Purchased.*
- B 91. A small stalked Sponge, somewhat resembling a Cauliflower in shape ; it is of a light yellow colour, and its fibres minute and closely reticulated. When examined microscopically, the external surface is found to be made up of a delicate framework of small bi-acicular spicula, with very little trace of horny material ; whilst in the interior the horny fibres are large and abundant, with numerous spicula imbedded in them.
Hab. Locality unrecorded. *Presented by John Quekett.*
- B 92. A Sponge of a honeycomb appearance ; the fibres are arranged in parallel lines with short transverse branches, having bi-acicular spicula within them, and a few projecting from their sides, but all are covered with a layer of horny matter. The spicula within the fibres are few, and lie parallel with them.
Hab. Locality unrecorded. *Purchased.*
- B 93. A branched Honeycomb Sponge, possessing somewhat of the same characters as the preceding specimen.
Hab. Locality unrecorded. *Purchased.*

- B 94. A fragment of a Sponge with coarse stiff fibres, and presenting the appearance of pits on one surface ; when examined microscopically, the fibres are seen to have small bi-acicular spicula very sparingly scattered in their interior, and others lying parallel with them on the exterior.

Hab. Locality unrecorded.

Purchased.

- B 95. A fragment of an irregular Sponge, with large scattered oscula, the orifices of which are raised into lips or ridges ; the fibre has very small bi-acicular spicula sparingly and irregularly distributed within it.

Hab. Locality unrecorded.

Purchased.

- B 96. A part of a Sponge which has the fibres arranged in coarse broad laminæ radiating from a central axis, with finer fibres connecting them ; under the microscope the fibres are seen to be solid and granular, the larger ones sparingly filled with coarse irregularly placed fragments of spicula, whilst the smaller ones are without any. This specimen is very closely allied to the pyriform Sponges before described.

Hab. Locality unrecorded.

Purchased.

- B 97. A branching Sponge which presents the appearance of having, while in a soft state, been irregularly compressed between the finger and thumb ; the oscula are small, round, and principally confined to the ridges. The sponge has a smooth closely matted external surface, but on section the interior has a coarser and looser fibre. With the microscope the fibres are seen to contain slightly curved bi-acicular spicula, only partially filling them, and being irregularly placed with regard to them.

Hab. Locality unrecorded.

Purchased.

- B 98. Two specimens of a Sponge of a nodulated figure, with numerous large oscula occurring principally on the upper surface. The horny fibres are of small size, and form a coarse hexagonal network ; they are completely filled with long bi-acicular spicula occurring in parallel rows.

Hab. Cape of Good Hope.

Purchased.

- B 99. A large flattened digitate Sponge, composed of fibres forming a loose network. The oscula are nearly of uniform size, and occur on the edges of

the finger-like processes. When examined microscopically, the horny framework is found to be filled with long bi-acicular spicula occurring in parallel rows. This specimen is probably the *Spongia digitata* of Esper.
Hab. Locality unrecorded. *Purchased.*

- B 100. A smaller Sponge, probably of an allied species, in which the oscula are not entirely confined to the edges, but are widely distributed over both of the flattened surfaces. The horny material is almost completely obliterated by the large quantity of long bi-acicular spicula imbedded in it.

Hab. West Indies.

Presented by T. H. Stewart, Esq.

- B 101. A small rounded Sponge attached to a shell. It is of a light brown colour, and composed of a delicate network of horny fibres, which are completely filled with acicular spicula.

Hab. Moluccas.

Purchased.

- B 102. Two fragments of a Sponge with coarse white fibres, having a somewhat fan-shaped radiating appearance. All the fibres are broad, and closely packed with long straight bi-acicular spicula arranged in parallel rows.

Hab. Locality unrecorded.

Purchased.

- B 103. A fragment of an apparently tubular Sponge, with the fibres forming coarse bifurcating longitudinal branches, which are developed into papillary processes externally, the intermediate finer meshes all converging towards them. The fibres are exceedingly brittle, and when examined with the microscope, are found to be completely filled with spicula placed in parallel rows.

Hab. Locality unrecorded.

Purchased.

- B 104. A Sponge presenting the same characters as the above, but a more perfect specimen.

Purchased.

- B 105. A compressed tubular Sponge, presenting a reticulate arrangement of fibres externally, which are irregularly raised into papillary processes. It

has three tubes, the middle or largest being about two inches and a half in the long axis at the mouth ; the shortest tube opens into the large one. The oscula occur to within half an inch of the mouth. The fibres themselves are coarse and have a few bi-acicular spicula, which are most numerous at the angles of the reticulations.

Hab. Locality unrecorded.

Purchased.

- B 106. A small branching Sponge, attached to the valve of a shell (*Arca*). It is composed of a framework of yellow horny fibres, filled with short, stout, acicular spicula.

Hab. Locality unrecorded.

Purchased.

Sponges with tuberculated Spicula.

- B 107. A flattened fan-shaped specimen of Sponge, having both its surfaces covered with radiating ridges, between which is a finer network surrounding the oscula. It is exceedingly stiff and heavy, as if a large amount of earthy matter entered into its composition. When examined microscopically, it is found to be composed of large horny fibres, loaded with spicula of two kinds, one long and bi-acicular, occupying the centre of the fibres ; the other short and tuberculated, with one extremity imbedded in the fibre, whilst the other projects towards the network formed by the fibres.

Hab. Locality unrecorded.

Presented by John Quekett.

- B 108. A Palmate Sponge, attached to a valve of a small *Spondylus* ; both surfaces are nearly alike, and exhibit traces of numerous oscula. The whole fabric is made up of stiff, horny fibres, abounding in spicula of two kinds, like those in the last specimen, the first long and thin, imbedded in the fibre, the other short and tuberculated, attached by their bases, and projecting externally.

Hab. Locality unrecorded.

Presented by John Quekett.

- B 109. A flat, irregular Sponge, microscopically composed almost entirely of straight, smooth, bi-acicular spicula filling the fibre, and lying parallel

with it, having acicular tuberculated spicula protruding irregularly from the fibre, generally at right angles. The specimen presents the appearance of being much sea-worn. *Purchased.*

- B 110. A small tough, brown Sponge, full of oscula, about $\frac{1}{8}$ th of an inch in diameter. When examined microscopically, it is found to be composed of a very close network of horny fibres, from which tuberculated spicula project in every direction : these spicula are longer than those occurring in Preparations 107, 108.

Hab. Australia.

Presented by Mr. J. T. Norman.

- B 111. A small fragment of Sponge, somewhat of the same nature as the preceding ; but the oscula, although of equal size, are not nearly so numerous. It is of a light brown colour, and, like the preceding specimen, is made up of horny fibres, from which long tuberculated spicula project, but in consequence of the exterior of the Sponge being preserved, these will be found in bundles, giving a well-defined margin to the section.

Hab. Australia.

Presented by Mr. J. T. Norman.

- B 112. A portion of Sponge, the framework of which is made up of coarse acicular spicula, some of which, on a section of the Sponge, are seen to form white, branching bundles : these spicula are bound together here and there by small "simple bi-hamate" spicula ; scattered about in the sarcode of the Sponge are bi-anchorate spicula of a more complicated form, and termed "palmated inequi-anchorate" by Mr. Bowerbank ; these are arranged in radiating bundles, the smaller ends forming the centre.

Hab. Dardanelles.

Presented by J. T. Streatfeild, Esq.

- B 113. A Fan-shaped Sponge, made up of a series of branches, which are all united at the base and expanded at the outer margin. It is of a light yellow colour, with numerous oscula on the posterior, and but few on the anterior surface. These oscula have a slightly elevated margin, and at a little distance from the surface are closed by a thin membrane. When examined microscopically, the framework is found to be made up of deli-

cate horny fibres, with sarcodous matter between them, and both are largely supplied with minute tuberculated spicula.

Hab. Locality unrecorded.

Presented by John Quekett.

- B 114. A Sponge of a brown colour, composed of a close network of broad flat fibres, in which numerous elongated spicula are imbedded. Some thin transparent fleshy matter is seen between the larger fibres ; also abounding in spicula.

Hab. Locality unrecorded.

Purchased.

- B 115. A smaller specimen of the same species of Sponge, in which the fibrous framework is firmly bound up by the fleshy matter.

Purchased.

- B 116. Two specimens of Sponge, each consisting of three or more short cup-like processes, somewhat like those occurring in *Halichondria papillosa*. They are made up entirely of a light horny framework, without spicula. The fibres are of two kinds, one coarse, and forming a network with large meshes ; the other small, and occurring on the outer surface, where they are arranged in a net-like form, with very minute meshes.

Hab. Locality unrecorded.

Presented by John Quekett.

Genus DICTYOCYLINDRUS, Bowk.

Skeleton without fibre, composed of spicula disposed principally in the line of the axis of the Sponge, and at a slight angle to it, forming an irregular cylinder or network of spicula, cemented together near their apices.

- B 117. A specimen of *Dictyocylindrus setosus*, Bowk. The Sponge is fan-shaped, branching dichotomously, with a short pedicel, the surface setose ; the setæ long, and very numerous, usually simple, sometimes branching dichotomously ; composed of numerous stout acerate spicula, disposed in parallel lines. The oscula and pores are inconspicuous. The dermal membrane is pellucid and spiculose ; the spicula of the skeleton are cylindrical, long, somewhat slender, and more or less flexuous.

Hab. Bere Regis, Devon.

Presented by John Quekett.

- B 118. A small, stiff, branching specimen of Sponge, which, like *Halichondria setosa* and *Dictyocylindrus*, is remarkable for having spicula projecting from the whole of the outer surface. When examined microscopically, it is found to be made up of large, broad, horny fibres, some of which contain spicula in their interior, but the majority of them have the spicula simply imbedded by their bases, whilst their free extremities project externally.

Hab. Locality unrecorded.

Presented by John Quekett.

- B 119. Two specimens of a Sponge presenting the shape of an *Alcyonium*, having an expanded base, a short thick stem, and then spreading into irregular rounded nodules ; examined microscopically, each is found to be composed almost entirely of coarse, curved, bi-acicular spicula.

Hab. Locality unrecorded.

Presented by John Quekett.

Genus HYMENIACIDON, Bowk.

Skeleton without fibre. Spicula siliceous, dispersed irregularly on the surfaces of the interstitial membranes of the Sponge.

- B 120. The *Hymeniacidon caruncula*, Bowk. Cut or torn portions of this Sponge readily become united again in the course of a few hours.

Fig. Rep. of Brit. Association, 1856, p. 438.

Hab. Tenby.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

Genus RAPHYRUS, Bowk., MS.

Skeleton fibrous, but not horny, fibre composed of a dense mass of siliceous spicula, mixed together without order.

- B 121. The *Raphyrus Griffithsii*, Bowk.

Fig. Bowerbank, MSS.

Hab. Torquay.

J. S. Bowerbank, Esq., LL.D., F.R.S.

- B 122. A large specimen of *Raphyrus Griffithsii*, Bowk.

Fig. Quekett, MSS.

Hab. Oyster-beds midway between Brighton and Havre.

Purchased.

- B 123. A similar specimen of *Raphyrus* attached to a group of oyster-shells.

Purchased.

- B 124. A small specimen of Cup-shaped Sponge, known as Neptune's Goblet, *Raphyrus patera*. The cupped portion is about eight inches in diameter, and the stalk eight inches in length.

Hab. Singapore.

Presented by John Quekett.

- B 125. A larger specimen of *Raphyrus patera*; the cup being ten inches in diameter, whilst the stalk measures nine inches.

- B 126. A specimen of *Raphyrus patera*, fourteen inches in diameter; the stalk is twelve inches in length.

Hunterian.

*

- B 127. A specimen of *Raphyrus patera*, sixteen inches in height and thirteen inches in diameter at the brim of the cup, whilst it is eighteen inches in diameter at the centre.

Hab. Singapore.

Presented by John Quekett.

- B 128. A large Neptune's Goblet, *Raphyrus patera*, in which all the animal matter has been preserved, and on this account it is much darker in colour than either of the preceding specimens.

Presented by the Devon and Cornwall Natural History Society.

- B 129. A specimen of *Raphyrus patera*, which has been divided vertically to show the thickness of its walls. The stem or peduncle is solid and heavy, from the quantity of siliceous spicula entering into its composition.

Presented by John Quekett.

- B 130. A transverse slice taken from the extremity of the stalk of the *Raphyrus* last described; it is exceedingly heavy, and almost wholly made up of siliceous spicula.

Presented by John Quekett.

- B 131. A round Sponge belonging to the genus *Raphyrus*.

Hab. Feejee Islands. *Presented by Captain Sir E. Home, Bart., R.N.*

- B 132. A Cup-shaped Sponge of conical figure, still attached to the rock upon which it grew. The internal surface presents numerous large oscula, which are disposed in a tolerably regular manner. Sponges very similar in shape to this one are not unfrequently found in a fossil state in the chalk.

Hab. Locality unrecorded.

Hunterian.

- B 133. A thick firm Sponge, of semicup-shaped figure, one cup (the lower) nearly complete, having the upper and larger one attached to its side. Both internal and external surfaces are smooth, and enclose a coarser reticulated structure between them. All the fibre is occupied with long bi-acicular spicula. This specimen somewhat resembles some of the varieties of Neptune's Goblet, *Raphyrus patera*.

Hab. Locality unrecorded.

Purchased.

- B 134. A tubular Sponge, 6 inches in length and 3 inches in external, and $2\frac{1}{2}$ inches in internal diameter. It is made up of a network of very broad and stiff fibres, many of which have coalesced, and form flattened plates of horny material. When examined microscopically, all the fibres are filled with closely packed, long, slender bi-acicular spicula. This specimen very much resembles the internal structure of the large Neptune's Goblet, *Raphyrus patera*.

Hab. Locality unknown.

Purchased.

- B 135. A portion of the base of the same Sponge, showing the peculiar arrangement and palmated condition of its fibres.

- B 136. An oval Sponge, 4 inches in its long diameter, firmly attached to a branch of Coral; it presents a coarse hexagonal network externally, somewhat like that variety of Sponge called the Turkey Honeycomb. It is very stiff and heavy, both from the number of spicula contained in the fibres, and from the large quantity of earthy matter entangled in their meshes.

Hab. Indian Seas.

Purchased.

- B 137. A small Cup-shaped Sponge, having a stalk about an inch in length, and rather more than one third of a second cup attached by a short stalk to the parent one. All its surfaces are very rough, and when examined microscopically, the fibres are largely coated with silex externally, and have bi-acicular spicula within.

Hab. Australia.

Purchased.

- B 138. A larger Cup-shaped Sponge of the same species as the preceding. On the inner surface, and near the outer edge, the smooth, spicular coating has been removed, and the horny framework well displayed. Near the bottom of the cup are numerous oscula, which are slightly elevated above the general surface. The minute structure is like that of the preceding specimen.

Hab. Australia.

Presented by Charles Stokes, Esq., F.R.S.

- B 139. A portion of a larger Sponge of the same species, in which the peculiar rugose surface is well shown; the oscula are principally confined to the lower edge of the specimen, and, like those in the smaller ones, are considerably raised above the general surface.

Hab. Locality unrecorded.

Purchased.

- B 140. A Cup-shaped Sponge having a stalk one inch in length. It is comparatively smooth, both externally and internally, and provided with numerous oscula, each of about $\frac{1}{12}$ th of an inch in diameter. When examined microscopically, the entire framework is made up of delicate fibres, which support masses of bi-acicular spicula.

Hab. Locality unrecorded.

Purchased.

- B 141. A Sponge consisting of two well-marked parts, viz. a stalk and head somewhat resembling a Mushroom in shape. The upper surface is flat and tolerably smooth, whilst the under is much corrugated. It is composed internally of short radiating fibres, joining on both surfaces a smooth delicate network, which in some places covers, and in others surrounds, a series of large openings. The fibre contains acicular spicula, many of which are imbedded in it, whilst others project beyond. Numerous fragments of shell and flint occupy the large openings above described.

Hab. Australia.

Purchased.

- B 142. A larger specimen of the same kind of Sponge, exhibiting the stalk and the corrugated under surface more plainly than the preceding one.

Hab. Australia.

Purchased.

- B 143. A larger specimen, probably of the same species of Sponge, which, on being dried, has had the upper broad part or head bent upon itself; so that, instead of being about 18 inches in diameter, it is now not more than half the size it would be were it flattened out.

Hab. Australia.

Purchased.

- B 144. A stalked Sponge, probably of the same genus as the preceding, but in which the reticulations and the fibre are much coarser: in general appearance this Sponge very much resembles *Halichondria infundibuliformis* and *ventilabrum*.

Hab. Australia.

Purchased.

Genus *STEMATUMENIA*, Bowk.

Skeleton composed of solid, compressed, keratose fibre, in which siliceous spicula and grains of sand are occasionally imbedded. Interstitial substance fibro-membranous; investing membrane simple.

- B 145. A fine specimen of *Stematumenia caliciformis*, Bowk., attached to a piece of *Tubipora musica*.

Hab. St. Lucia.

Presented by Sir J. Banks, Bart., 1810.

Genus *DYSIDEA*, Johnston.

Sponge multiform, sessile, imperfectly cellular, composed of a gelatinous membrane or basis containing, or frosted with, amorphous particles of sand.

- B 146. The *Dysidea Kirkii*, Bowk.

Fig. Trans. of Micr. Society, vol. i. p.

Hab. Australia.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

- B 147. The *Dysidea fragilis*, Montagu.

Fig. Johnston's British Sponges, p. 187. pl. 13. f. 6. pl. 14. f. 4.

Hab. Devon.

Presented by John Quekett.

- B 148. An irregular mass of Sponge, probably of the genus *Dysidea*. It is attached to a mass of rock, and is exceedingly friable.

Hab. Oyster-beds between Brighton and Havre.

Purchased.

Sponges allied to those of the genus DYSIDEA.

- B 149. An irregular convoluted mass of Sponge, attached to some fragments of coral by several short stalks. It is composed of small fibres, which form a delicate hexagonal network upon its surfaces. These fibres, when examined microscopically, are all more or less filled with grains of silex, as in *Dysidea*.

Hab. Locality unrecorded.

Purchased.

- B 150. A fragment of Sponge, somewhat of the same character as the preceding specimen, in which both the fibres and their reticulations are much coarser, but filled with grains of silex in a precisely similar manner.

- B 151. A Cup-shaped Sponge, consisting of two or more cups, which in drying have become considerably flattened; they are attached to a mass of coral. Both inner and outer surfaces are comparatively smooth, arising from a copious deposit of small grains of silex upon them. When examined microscopically, the tissue between the two surfaces is made up of horny fibres of various sizes, the greater part of which are occupied by grains of silex, as in *Dysidea*.

Hab. Locality unrecorded.

Purchased.

- B 152. A similar specimen of Sponge, in which there are traces of three cups. Like the preceding one, it was, no doubt, attached to a piece of coral. Numerous fragments of Nullipores occur on the outer surface.

Hab. Locality unrecorded.

Purchased.

- B 153. A small soft Sponge, composed of a network of horny fibres of various sizes. The base is smooth and flattened, and many of the fibres are coated with earthy matter. It is exceedingly brittle, and, when examined microscopically, all the larger fibres, like those of *Dysidea* and Preps. 149 & 151, contain small grains of silex.

Hab. Cape of Good Hope.

Purchased.

- B 154. A small specimen of Sponge, of a light brown colour and stiff fibre. When examined microscopically, it is found to be composed of large horny fibres, many of which are filled with spicula and with grains of silex, as in *Dysidea*. Amongst the fibres may occasionally be seen some examples of the bicurvate form of spiculum.

Hab. Locality unrecorded.

Presented by Mr. J. T. Norman.

- B 155. A branched Sponge very much resembling an *Alcyonium* in external appearance. It is composed of stiff fibres arranged in a radiating manner, with smaller fibres given off at right angles to them ; so that a series of foramina or oscula are formed. When examined microscopically, the fibres are found to be of large size, some of them solid, others occupied with grains of silex and with fragments of spicula, as in *Dysidea*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus CLIONA.

Sponge living in cavities or perforations in stone or shell ; surface of Sponge covered with numerous circular oscula, often filled with a mammillated plug ; spicula pin-shaped.

- B 156. The *Cliona celata*, Grant. In perforated stone and shell.

Fig. Johnston's British Sponges, p. 125.

Hab. Tenby.

Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

- B 157. The *Cliona celata*, Grant, in a valve of the *Ostrea edulis*. The shell is much thickened by the animal, so as to defend it from the ravages of the parasite.

Hab. English coast.

Presented by John Quekett.

- B 158. The *Cliona celata*, in a thickened shell of *Patella*.

Hab. British coast.

Presented by T. Rupert Jones, Esq., F.G.S.

- B 159. A species of *Cliona*, in the *Strombus pugilis*, Linn.

Hab. West Indies.

Presented by J. Lee, D.C.L., F.R.S.

- B 160. A species of *Cliona*, in the *Strombus inermis*, Sow., in which the canals are disposed so that their external openings form a delicate pattern.
Hab. West Indies. *Purchased.*
- B 161. A species of *Cliona*, in a *Cassis*, the shell being thickly riddled by the passages occupied by the Sponge.
Hab. South Seas. *Hunterian.*
- B 162. Portion of a scallop shell perforated by a *Cliona*.
Hab. Guernsey. *Presented by Edward Buckland, Esq.*
- B 163. The flat valve of a Common Oyster, which has been horizontally bisected to show the cavities formed by the perforating powers of a *Cliona*.
Hab. British coast. *Presented by Mr. George Carter.*
- B 164. A portion of the shell of a transparent species of *Pinna*, in which the fibres of a boring Sponge may be readily seen between the laminæ.
Fig. Quekett, *Hist. Lect.* vol. ii. p. 42.
Hab. Locality unrecorded. *Presented by John Quekett.*
- B 165. A portion of one of the valves of a transparent species of *Pinna*, in which the filaments of a Sponge (*Cliona*) are visible in many parts; they occur between the inner and outer layers of the shell structure.
Hab. Mediterranean. *Presented by Mr. J. T. Norman.*

Genus *PACHYMATISMA*, Bowk.

Skeleton composed near the external surface of short fasciculi of siliceous spicula, disposed in lines at about right angles to the surface of the Sponge. Central portion of the Sponge irregular. Dermis crustular, furnished abundantly with closely-packed gemmules. Gemmules siliceous, formed of cuneiform spicula firmly cemented together in lines radiating from the centre of the gemmule.

- B 166. The *Pachymatisma contorta*, Bowk.
Fig. Bowerbank MSS.
Hab. Coral Reefs, Feejee Islands.
Presented by Captain Sir E. Home, Bart., R.N.

B 167. The *Pachymatisma Johnstonia*, Bowk.

Fig. Johnston's Brit. Sponges, p. 244.

Hab. South coast, England. *Presented by Charles Stokes, Esq., F.R.S.*

B 168. The *Pachymatisma stellata*, Bowk.

Fig. Bowerbank MSS.

Hab. Coral Reefs, Feejee Islands.

Presented by Captain Sir E. Home, Bart., R.N.

B 169. A small globular specimen of *Pachymatisma stellata*, Bowk.

Hab. Coral Reefs, Feejee Islands.

Presented by Captain Sir E. Home, Bart., R.N.

Genus *ECIONEMIA*, Bowk.

Skeleton having a strong axial column of closely packed siliceous spicula disposed in lines parallel to the long axis of the Sponge, from which axial column a peripheral system of spicula radiates at about right angles.

B 170. The *Ecionemia acervus*, Bowk.

Fig. Bowerbank MSS.

Hab. Feejee Islands. *Presented by Captain Sir E. Home, Bart., R.N.*

B 171. A rounded mass of very dense Sponge, belonging to the genus *Ecionemia*, having a thick external coating, and an internal structure almost entirely composed of siliceous matter, so that it is difficult to remove a portion with a knife. After long boiling in nitric acid, it will break up into large spicula, having one end pointed and the other provided with three or four cusps, with which numerous small rounded grains of silex are mixed.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus *TETHEA*, Lam.

Sponge tuberous, suborbicular, solid and compact, invested with a complete rind or skin, the interior sarcoid loaded with siliceous crystalline spicula col-

lected into bundles, and radiating from a more compact nucleus to the circumference. Marine.

B 172. The *Tethea cranium*, Lam.

Fig. Johnston's Brit. Sponges, p. 83. pl. 1. f. 1-8.

Hab. Shetland. *Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.*

B 173. The *Tethea cranium*, Lam.

Fig. Johnston's British Sponges, p. 83. pl. 1. fig. 1-8.

Hab. Feejee Islands. *Presented by Captain Sir E. Home, Bart., R.N.*

B 174. A small specimen of *Tethea cranium*, Lam., attached to a species of *Halichondria*.

Hab. Shetland. *Presented by J. S. Bowerbank, Esq., LL.D., F.R.S.*

B 175. Spicula of *Tethea cranium*, detached from the horny matter.

Fig. Hist. Cat. Roy. Coll. Surgeons, vol. i. p. 186.

Prepared from a specimen presented by J. S. Bowerbank, Esq., LL.D., F.R.S.

B 176. The *Tethea simillimus*, Bowk.

Fig. Bowerbank MSS.

Hab. Tongatabue. *Presented by Captain Sir E. Home, Bart., R.N.*

B 177. Spicula of *Tethea simillimus*, detached from the horny matter.

Fig. Hist. Cat. Roy. Coll. Surgeons, vol. i.

Prepared from a specimen presented by Captain Sir E. Home, Bart., R.N.

B 178. A rounded Sponge, *Tethea Lyncurium*, Lam., *Cydonium Mulleri*, Flem.; the interior presents a fibrous structure, whilst the exterior is hard and tuberculated. A specimen of this Sponge preserved in spirit will be found in the Natural History Series, No. 47 c.

Fig. Johnston's Brit. Sponges, p. 85. fig. 12. p. 87. Cat. of Nat. Hist. in Spirit, vol. i. p. 8.

Hab. Plymouth Sound. *Presented by T. H. Stewart, Esq.*

Genus GEODIA, Lam.

Sponge tuberous, solid, permeated with irregular sinuous canals; the interior

composed of siliceous spicula collected into fascicles, and laid amid an organic sarcoid matter ; the surface covered with a solid crust composed of siliceous globules closely agglutinated together. Marine.

- B 179. The *Geodia depressa*, Bowk., in which the outer crust is exceedingly hard and quite white, the under surface being provided with numerous foramina.
Fig. Bowerbank MSS.

Hab. Dardanelles.

Presented by J. Armitage, Esq., M.D.

- B 180. The *Geodia depressa*, Bowk.

Hab. Dardanelles.

Presented by J. T. Streatfeild, Esq., M.R.C.S.E.

- B 181. A smaller specimen of *Geodia depressa*, Bowk. It shows the disposition of the spicula supporting the crust, and those forming the mass of the specimen.

Presented by J. T. Streatfeild, Esq., M.R.C.S.E.

- B 182. Spicula and Gemmules of *Geodia depressa*, Bowk., detached from the fleshy matter.

Prepared from a specimen presented by J. T. Streatfeild, Esq., M.R.C.S.E.

GENUS GRANTIA, Fleming.

Sponge firmish and inelastic, usually white, multiform, of a close texture but porous, and composed of calcareous spicula compacted in a gelatinous base ; spicula simple and stellated, oscula always distinct. Marine.

- B 183. The *Grantia compressa*, Flem., on an Ascidian ; a *Pycnogonum* has crawled into the Sponge.

Fig. British Sponges, Johnston, p. 174. pl. 20. f. 1.

Hab. Plymouth, low tide.

Presented by T. H. Stewart, Esq.

- B 184. A group of *Grantia compressa*, on *Corallina officinalis*.

Fig. British Sponges, Johnston, p. 174. pl. 20. f. 1.

Hab. Plymouth, low tide.

Presented by T. H. Stewart, Esq.

- B 185. *Grantia ciliata*, Fabric., on *Corallina officinalis*.

Fig. British Sponges, Johnston, p. 176. pl. 22. f. 4. pl. 21. f. 6, 7.

Hab. Plymouth, low tide.

Presented by T. H. Stewart, Esq.

Genus *LEUCONIA*, Grant.

Sponge furnished with cloacæ one or more ; parietes of Sponge formed of a mass of irregularly disposed triradiate and other spicula, permeated by sinuous excurrent canals, the oscula of which are irregularly disposed over the surface of the cloacæ.

B 186. *Leuconia nivea*, Grant.

Fig. British Sponges, Johnston, p. 181. pl. 21. f. 8.

Hab. Scarborough.

Presented by W. Bean, Esq.

B 187. *Leuconia fistulosa*, Bowk. *Grantia fistulosa*, Johnston.

Fig. British Sponges, Johnston, p. 181. pl. 20. f. 7.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

Genus *LEUCOSOLENIA*, Bowk.

Sponge fistular, formed of a single layer of triradiate and other spicula, surrounding a large central cloaca which extends into all parts of the Sponge.

B 188. *Leucosolenia botryoides*, Ellis and Soland. ; on the Polypidom of *Halecium halecinum* ; also two small specimens of *G. compressa*.

Fig. British Sponges, Johnston, p. 178. pl. 21. f. 1-5.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

*Siliceous Sponges.*Genus *DACTYLOCALYX*, Stutch.

Sponge fixed, rigid, siliceous ; incurrent canals uniform in size ; excurrent canals large, forming deep sinuosities on the outer surface, radiating from the root to the outer circumference.

B 189. Several fragments of a small silicified Sponge, *Dactylcalyx pumiceus*, Stutch. ; it is of an opaque white colour, and exceedingly brittle. The entire framework, as well as that of the spicula, is composed of silex.

Fig. Quek. Lect. on Hist. vol. ii. p. 17 ; Proc. Zool. Soc. 1841, p. 86.

Hab. Barbadoes.

Presented by John Quekett.

- B 190. A larger specimen of *Dactylocalyx pumiceus*, in which the siliceous matter is darker in colour than in the preceding one, and the preparation itself very much resembles a piece of dried bread.

Hab. Barbadoes.

Presented by Mrs. Buckland.

Siliceous Sponges of small size met with as parasites on other Sponges and Corals.

- B 191. A series of specimens of a Coral, *Oculina rosea*, upon the bases of which are many minute siliceous Sponges, which are remarkable for the variety in the forms of the spicula entering into their formation.

Hab. Pacific Ocean.

Purchased.

Undescribed Sponges having peculiar spicula.

- B 192. A small Sponge, possessing "simple bihamate" and "acerate entirely and verticillately spined" spicula.

Fig. Bowerbank, Phil. Trans. vol. cxlviii. p. 279.

Hab. Reefs, Tongatabue. *Presented by Capt. Sir E. Home, Bart., R.N.*

- B 193. A fragment of Sponge with "Dentalo-palmate angulated anchorate" spicula.

Fig. Bowerbank, Phil. Trans. vol. cxlviii. p. 297.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- B 194. A series of fragments of *Tubipora musica*, which are more or less covered with a delicate silky Sponge, almost wholly made up of "bi-acerate" spicula.

Hab. Singapore.

Presented by John Quekett.

C A T A L O G U E.

R E C E N T I N V E R T E B R A T A.

Class III. POLYPIFERA—ZOOPHYTES.

ANTHOZOA.

THE term *Zoophyte* is applied to certain aquatic animals, the individuals (Polypes) of which are in a few instances separate and perfect in themselves; but, as a general rule, they are compound animals, each zoophyte consisting of an indefinite number of individuals or polypes, organically connected and placed in membranous, horny, or calcareous cases or cells, forming by their aggregation corals or plant-like polypidoms, termed Coralla.

They are divided into two great classes, *Anthozoa* and *Polyzoa*; and the first of these is further subdivided into three orders, as follows: *Hydroida*, *Asteroida*, and *Helianthoida*.

Order I. HYDROIDA.

Family *Corynidæ*.

The Hydroida, with the exception of the two genera *Hydra* and *Cordylophora*, are all marine, and vary in height from a few lines to a foot. A few of

them are naked, but the remainder are invested with a transparent horny sheath or skeleton, of a yellow colour—the Polypidom or Corallum—which is of a tubular character, investing the soft parts of the animal. The stem is frequently branched, and the sides or extremities of these branches are expanded into little cups for the polypes, which nearly resemble the Hydra in form.

Genus *CORDYLOPHORA*, Allman.

Polypidom horny, branched, rooted by a creeping tubular fibre; branches tubular. Polypes developed at the extremities of the branches, ovoid, bearing the mouth at the distal extremity, and furnished with scattered filiform tentacula.

C 1. The *Cordylophora lacustris*, Allman.

Fig. Phil. Trans. 1853. vol. cxliii. part 1. p. 367. Johnston's Brit. Zooph. vol. i. p. 44.

Hab. Floating timber, West India Docks. Grand Canal, Dublin.

Presented by John Quekett.

Family *Tubulariadae*.

Genus *TUBULARIA*, Linn.

Polypidom horny, fixed by a creeping fibre, erect, fistular and unbranched, the tube filled with a semifluid medulla; polypes placed at the extremities of the tubes, non-retractile, fleshy, furnished with two circles of filiform smooth tentacula; one row surrounds the middle of the heads, and the other is placed round the mouth; bulbules clustered, shortly pedicled, placed within and at the base of the lower tentacula; embryo sometimes in the form of a Beroë, sometimes of a Hydra.

C 2. The Tubular Coralline, *Tubularia indivisa*, Lhwyd.

Fig. Ellis's Zooph. 31. Johnston's Brit. Zooph. p. 48. pl. 3. figs. 1, 2.

Hab. On shells and stones from deep water; common.

Presented by John Quekett.

Family *Sertulariadae*.Genus *HALECIUM*, Oken.

Polypidoms rooted, plant-like, the stem composed of aggregated subparallel capillary tubes ; the branches alternate, spreading bifariously ; cells tubular, subsessile, jointed at the base, arising alternately from opposite sides, one under every joint of the branchlets ; ovarian vesicles irregularly scattered ; polypes hydraform, scarcely retractile within their cells.

C 3. A specimen of *Halecium halecinum* growing from the case of an annelid.

Fig. Johnston's Brit. Zooph. p. 58. pl. 8.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

Genus *SERTULARIA*, Linn.

Polypidoms plant-like, horny, rooted, variously branched, tubular, filled with a semifluid organic pulp ; the polypes contained within sessile cells, which are variously, but always determinately, disposed along the sides of the main stalk or branchlets, and are never terminal ; ova contained in horny deciduous vesicles, scattered over the polypidom ; embryos planaria-like.

C 4. A large mass of *Sertularia operculata*, Linn., attached to the valves of a Mussel, *Mytilus magellanicus*.

Fig. Johnston's Brit. Zooph. p. 77. pl. 14. Esper, Pflanz. tab. 4.

Hab. Australian Seas. Presented by Capt. Sir E. Home, Bart., R.N.

C 5. A similar specimen of *Sertularia operculata*, Linn., in which the ovigerous vesicles are very numerous.

Presented by Capt. Sir E. Home, Bart., R.N.

C 6. A mass of *Sertularia operculata*, Linn., attached to a single valve of *Mytilus magellanicus*.

The original label, which is preserved, shows that this specimen, like those of some of the Corals presently to be described, was once the property of Mr. Ellis.

Hunterian.

- C 7. A mass of *Sertularia operculata*, Linn., in which the ovigerous vesicles are very numerous.
Fig. Johnston's Brit. Zooph. p. 77. pl. 14. Ellis's Zooph. p. 39.
Hab. Australian Seas. *Presented by Prof. Busk, F.R.S.*
- C 8. The Sea-Cypress, *Sertularia cupressina*, Ellis.
Fig. Ellis's Zooph. 38. Johnston's Brit. Zooph. p. 80. pl. 16.
Hab. Coasts of Britain. *Prepared by Mr. H. Goadby.*
- C 9. The *Sertularia elongata*, Lamour.
Fig. Lamour. Cor. flex. p. 139. pl. 5. fig. 3.
Hab. Australia. *Presented by Prof. Busk, F.R.S.*
- C 10. A series of specimens of *Sertularia elongata*, Lamour.
Fig. Johnston's Brit. Zooph. p. 82.
Hab. Port Phillip. *From the Museum of the late Robert Brown, D.C.L.*
- C 11. The Lily or Pomegranate-flowering Coralline, *Sertularia rosacea*, Ellis.
Fig. Ellis's Zooph. 39. Johnston's Brit. Zooph. p. 64. pl. 11. fig. 1.
Esper, tab. 20.
Hab. On Corallines and old shells, deep water; common.
Prepared by Mr. H. Goadby.
- C 12. A large mass of *Sertularia rosacea*, Ellis, resembling in some of its characters the four preceding specimens.
Fig. Johnston's Brit. Zooph. p. 64.
Hab. Deep water near Plymouth. *Presented by T. H. Stewart, Esq.*
- C 13. The *Sertularia fallax*, Rev. J. Fleming, *S. pinnata*, Johnston.
Fig. Johnston's Brit. Zooph. p. 73. pl. 11. figs. 5. 6. 2.
Hab. Scarborough. *Presented by W. Bean, Esq.*
- C 14. A specimen of *Sertularia nigra*, Pall., with the ovigerous capsules.
Fig. Johnston's Brit. Zooph. p. 68. pl. 12. figs. 1, 2.
Hab. Eddystone, English Channel, in 50 fathoms.
Presented by T. H. Stewart, Esq.

Genus ANTENNULARIA, Lamarck.

Polypidom plant-like, horny, simple, or branched irregularly; the shoots fistular, jointed, clothed with hair-like verticillate branchlets; cells small, sessile, campanulate, unilateral; vesicles scattered, unilateral; polypes hydraform.

- C 15. A specimen of the Lobster's-horn Coralline of Ellis, *Antennularia antennina*, Flem.

Fig. Johnston's Brit. Zooph. p. 86. pl. 19. figs. 1. 3.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- C 16. A group of *Antennularia antennina*, Flem., with a delicate species of *Salicornaria* at its base.

Hab. Near the Eddystone, in deep water.

Presented by T. H. Stewart, Esq.

- C 17. The *Antennularia antennina*, Flem., in which the ovigerous vesicles are well displayed.

Hab. Plymouth South.

Presented by T. H. Stewart, Esq.

- C 18. A species of *Antennularia* allied to *A. antennina*, Flem., in which the finer parts of the branchlets are wanting.

Hab. Locality unrecorded, probably Australian.

From the Museum of the late Robert Brown, D.C.L.

- C 19. Two specimens of *Antennularia* allied to *A. antennina*, Flem., in which the branchlets are perfectly displayed.

Hab. Locality unrecorded.

From the Museum of the late Robert Brown, D.C.L.

- C 20. The *Antennularia ramosa*, Lam.

Fig. Johnston's Brit. Zooph. p. 88. pl. 20.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- C 21. A variety of *Antennularia ramosa*, Lam., in which the polypidom has a long stem, and branches dichotomously at the top.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

Genus PLUMULARIA, Lam.

Polypidom plant-like, rooted, simple or branched, the shoots and offsets plumous ; cells small, sessile, unilateral, usually seated in the axilla of a horny spine ; vesicles scattered, unilateral ; polypes hydraform.

- C 22. A small specimen of *Plumularia pluma*, Flem., *P. cristata*, Johnston.

Fig. Flem. Brit. Anim. 546. Johnston's Brit. Zooph. p. 92.

Hab. Isle of Wight.

Presented by W. Bean, Esq.

- C 23. The *Plumularia Macgillivrai*, Busk.

Fig. Voy. of 'Rattlesnake,' vol. i. Appendix, p. 400.

Hab. Philippine Islands. *From the Museum of the late Robt. Brown, D.C.L.*

- C 24. An undescribed species of *Plumularia*.

Hab. Caribbean Sea.

Presented by Charles Stokes, Esq., F.R.S.

- C 25. The *Plumularia cristata*, Ellis, *Menipea cirrata*, Busk, with a Bryozoon, *Cellaria plumosa*, attached to its base.

Fig. Busk, Cat. of Zooph. p. 21. pl. 20. figs. 1 & 2.

Hab. East Indies.

Presented by Mr. J. T. Norman.

Family Campanulariadæ.

Genus LAOMEDEA, Lamour.

Polypidom rooted by a creeping fibre, plant-like, erect, jointed at regular intervals, the joints ringed, incrassated, giving origin, alternately from opposite sides, to the shortly-pedicled cells ; cells campanulate ; vesicles axillary ; polypes hydraform.

- C 26. The Sea-thread Coralline, *Laomedea dichotoma*, Lamour.

Fig. Johnston's Brit. Zooph. vol. i. p. 102.

Hab. On old shells and other submarine bodies within tide-mark ; common.

Prepared by Mr. H. Goadby.

- C 27. A species of *Laomedea*, *L. membr.-pilosa*, Busk.

Fig. Busk, MS., 1850.

Hab. Whitby.

Presented by Prof. Busk, F.R.S.

Genus CAMPANULARIA, Lam.

Polypidom rooted, creeping or, when compound, erect, the main tube filiform, continuous, giving off its pedunculated cells irregularly or in whorls; pedicels ringed, usually long; cells campanulate; vesicles scattered, sessile; polypes hydraform.

- C 28. The small Climbing Coralline, *Campanularia volubilis*, Ellis, *Sertularia volubilis*, Linn.

Fig. Johnston's Zooph. vol. i. p. 107. Esper, Pflanz. tab. 30.

Hab. Parasitical on other corallines and sea-weeds; frequent.

Presented by John Quekett.

- C 29. The Horse-tail Coralline, *Campanularia verticillata*, Johnston, *Sertularia verticillata*, Linn.

Fig. Johnston's Brit. Zooph. vol. i. p. 112. Ellis's Zooph. p. 50.

Hab. Coasts of Britain.

Presented by John Quekett.

Order II. ASTEROIDA.

The Zoophytes belonging to this Order are so named from the resemblance the Polypes bear to a star. The Polypes in this tribe have invariably eight tentacles; and the skeleton is composed either of horn or calcareous matter, in the form of a central axis or shaft, surrounded by a gelatinous or creto-gelatinous crust, in which the polypes are imbedded, and which open on the surface in a starred fashion with eight rays.

Family Pennatulidæ.

Genus PENNATULA, Cuv.

Polype-mass free, plumous, the shaft subcylindrical, naked beneath, pennated

above; pinnæ two-ranked, spreading, flattened, and polypiferous along the upper margin.

- C 30. A perfect specimen of the Cock's-comb Zoophyte, or Sea-pen, *Pennatula phosphorea*, Linn.

Fig. Johnston's Brit. Zooph. vol. i. p. 158. Dana's Zooph. p. 594.

Hab. East coast of Britain. *Presented by Prof. Busk, F.R.S.*

- C 31. A series of specimens of a species of *Pennatula*. They have some resemblance to the preceding specimen, but are larger, and of a red hue.
Hab. Locality unrecorded.

From the Museum of the late Robert Brown, D.C.L.

- C 32. Two specimens of a species of *Pennatula*, similar to the preceding, except being of a pale yellowish colour. In the plume-like fronds acicular shining spicula are distinguishable with a common magnifier.

Hab. Locality unrecorded.

From the Museum of the late Robert Brown, D.C.L.

- C 33. A species of *Pennatula*, very like a *Renilla* in shape, but differing in having a bony axis, which reaches more than an inch above the reniform expansion. In this last the large glistening acicular spicula are very prominent.

Hab. Locality unrecorded.

From the Museum of the late Robert Brown, D.C.L.

- C 34. A species of *Pennatula*, probably *P. phosphorea*, Linn. A label attached to the specimen described it as "*Pennatula* taken in the Cove of Cork, May 1817, with several others, in the mud brought up with the anchor of H.M.S. *Cyrus*." *From the Museum of the late Robert Brown, D.C.L.*

GENUS VIRGULARIA, Lamarck.

Polype-mass free, linear-elongate, "supporting, towards the upper extremity, sessile lunate lobes embracing the stem obliquely, and bearing a row of cells on their margin."

- C 35. A perfect specimen of the Sea-rush, *Virgularia mirabilis*, Lam., *Penatula mirabilis*, Linn., showing the calcareous axis and the alternate disposition of the polypes upon it.

Fig. Johnston's Brit. Zooph. p. 179. pl. 24. Dana's Zooph. p. 591.

Hab. Frith of Forth.

Prepared by Mr. H. Goadby.

- C 36. Three specimens, in a dried condition, of the Sea-rush, *Virgularia mirabilis*, Lam. The polypes are contracted, and exhibit clearly how they are placed in relation to the axis.

Hab. Seas of Norway and Britain.

Hunterian.

- C 37. A specimen of Sea-rush, *Virgularia*, upwards of 14 inches in length, consisting of a delicate thread-like axis, covered with a thick crust of two different colours, one yellow, and closely adherent to the axis, the other white, and arranged in a series of arches about one-tenth of an inch high. These arches appear to be connected with the polypes, and are given off alternately, so that a spiral appearance is produced.

Fig. Ellis's MS. in Mus. Coll. Surg.

Hab. Dominica.

The label found with this specimen is in the handwriting of Mr. Ellis and Dr. Solander. The former says, "Greg's *Gorgonia*, arched cells on the surface." The latter, "found on the sea-shore, and given, by desire of I. Greg, to him to forward to Mr. Ellis, it being rarely met with in Dominica."

Hunterian.

- C 38. Six specimens of the calcareous axis of a species of *Virgularia*.

Hab. Locality unrecorded.

Three of these specimens still exhibit traces of the fleshy crust and the cells of the polypes, which are disposed in a spiral manner. Some of them are perfect; and, on comparison with British species, this zoophyte most probably was 3 feet in height.

Hunterian.

- C 39. Three specimens of the calcareous axis of a species of *Virgularia* differing from the last in the manner in which they taper to a point. They are on an average 16 inches in length.

Hab. Locality unrecorded.

Hunterian.

- C 40. Eight specimens of the calcareous axis of another smaller species of *Virgularia*, the longest and most perfect being about a foot in length.

Hab. Locality unrecorded. *Presented by Charles Stokes, Esq., F.R.S.*

- C 41. A small specimen of probably the same species of *Virgularia* as those described, having a second axis firmly adherent to it for about one-third its length.

Presented by Charles Stokes, Esq., F.R.S.

- C 42. Two specimens of the calcareous axis of a species of *Virgularia*, differing from the former ones in being flattened on two of their sides and slightly curved. The markings on their surfaces are visible to the naked eye.

Hab. Locality unrecorded. *Presented by Charles Stokes, Esq., F.R.S.*

Genus PAVONARIA, Cuv.

Polype-mass linear-elongate, quadrangular ; polypes sessile, retractile, arranged subspirally on one side only of the posterior half of the rachis ; tentacula with intermediate spinules.

- C 43. *Pavonaria quadrangularis*, Blainville, *Pennatula quadrangularis*, Pallas.

Fig. Dana's Zooph. p. 598. Johnston's Brit. Zooph. vol. i. p. 164.
pl. 31.

Hab. Dredged near Oban, Argyllshire.

Presented by Prof. Edward Forbes, F.R.S.

- C 44. Six specimens of the stony axis of *Pavonaria quadrangularis*, Blainville, some of which are upwards of 2 feet in length.

Hab. Gulf of Carpentaria.

These specimens were dredged from a depth of 6 and 7 fathoms, by Lieutenant Chimmo, who states that they were grasped the whole length by a marine animal resembling a slug.

Purch

Family *Antipathidæ*.

Attached zoophytes, caulescent, and usually ramose; forming no coral secretions, except epidermic foot-secretions, which constitute the axis of the branches.

Genus ANTIPATHES, Ellis.

The *Antipathidæ* have a corneous spinulose axis, with a polype-covering wholly fleshy; they grow either in long stems, or are branched in imitation of trees, spreading shrubs, or in fan-like fronds. The horny axis is covered with minute spinules, which character distinguishes them from the axes of *Gorgoniæ*.

- C 45. A beautiful specimen of the *Antipathes spiralis*, Pallas, consisting of about twenty-seven coils, some exceeding, others a little less than one inch in diameter: a portion of the brown fleshy matter remains on the stem; but in those parts where it has been removed, the colour is lustrous black, covered with very minute spines.

Fig. Ellis's Zooph. tab. 19. p. 100. Esper, tab. 8. Dana's Zooph. p. 576.

Hab. The Mediterranean and Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

- C 46. Three specimens, probably of *Antipathes spiralis*, Pallas; differing, however, in having a stem as straight as *Gorgonia juncea*, but covered with delicate spines, and both of a black lustrous character when deprived of their fleshy crust.

Hab. East Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 47. Four specimens of the axis of a species of *Antipathes*, probably *A. spiralis*?, Pallas, all of which are jet-black, and covered with minute spines arranged in parallel rows. In thickness these axes are equal to *Antipathes glaberrima*, but differ, however, in their surfaces.

Presented by Charles Stokes, Esq., F.R.S.

- C 48. Four specimens of various parts of the axis of *Antipathes glaberrima*, Esper. The smooth, highly polished, black and partly brown metallic-like lustre, together with the short brown-tipped spines, sufficiently characterize this species.

Fig. Esper, tab. 9. Dana's Zooph. p. 585.

Hab. East Indies.

Hunterian.

- C 49. A specimen of *Antipathes Larix*, Esper, consisting of a simple black axis, from all sides of which numerous branchlets, varying in length from 2 to 4 inches, are given off. The crust is of a purple colour, except where the polype-cells are—here the colour is yellow; and as they project in a globular form beyond the other parts of the crust, they are very conspicuous, the branchlets assuming even somewhat of a beaded appearance.

Fig. Esper, tab. 4. Dana's Zooph. p. 577.

Hab. Mediterranean Sea. *Presented by Charles Stokes, Esq., F.R.S.*

- C 50. A species of *Antipathes* like *A. Larix*, Esper, consisting of a series of nearly straight stems, from which branches are given off on two sides only; all these branches, however delicate, are covered with minute spines, and have portions of fleshy crust adhering to them.

Fig. Esper, tab. 4.

Hab. West Indies, Caribbean Sea.

Presented by Charles Stokes, Esq., F.R.S.

- C 51. Two other specimens of *Antipathes Larix*, Esper, in which the same characters are preserved. *Presented by Charles Stokes, Esq., F.R.S.*

- C 52. A small specimen of *Antipathes myriophylla*, Pallas, remarkable for the beauty of the spines developed on the minute branches.

Fig. Ellis's Zooph. p. 102. tab. 19. Dana's Zooph. p. 578.

Hab. East Indies, Batavia. *Presented by Charles Stokes, Esq., F.R.S.*

- C 53. Two specimens of *Antipathes myriophylla*, Pallas.

Presented by Charles Stokes, Esq., F.R.S.

- C 54. A large specimen of the axis of an *Antipathes*, which is remarkable for the nodulated condition of its larger branches, due to the presence of numerous barnacles, each of which has been firmly fixed by a layer of horny matter of variable thickness. All the lesser branches are thinly coated with minute spines; and, as in *A. myriophylla*, the greater number of the small branches are given off on the upper side.

Fig. MS. in Mus. Coll. Surg.

Hab. Locality unrecorded. *Presented by Charles Stokes, Esq., F.R.S.*

- C 55. A small specimen of *Antipathes*, similar to the preceding.

Presented by Charles Stokes, Esq., F.R.S.

- C 56. The horny axis of a flabellate species of *Antipathes*, probably *A. reticulata*, Esper. It is 14 inches in height and 12 inches in breadth, and remarkable for the slenderness of the branches and branchlets.

Fig. Esper, tab. 11. Dana's Zooph. p. 579.

Hab. East Indies. *Presented by Charles Stokes, Esq., F.R.S.*

- C 57. A mass of the horny axis of *Antipathes ericoides*, Esper. Both branches and branchlets are covered with very minute spines.

Fig. Esper, tab. 6. Dana's Zooph. p. 580.

Hab. Indian Ocean. *Presented by Charles Stokes, Esq., F.R.S.*

- C 58. The *Antipathes Cupressus*, Ellis, *Gorgonia Abies*, Linn. It is about 2 feet high, and consists of a single straight stem, from which numerous branches are given off; all being covered with more or less minute spines.

Fig. Esper, tab. 3. Ellis's Zooph. p. 104. Dana's Zooph. p. 581.

Hab. East Indies. *Presented by Charles Stokes, Esq., F.R.S.*

- C 59. A smaller specimen of the *Antipathes Cupressus*, Ellis, in which the branches stand more erect than in the preceding.

Presented by Charles Stokes, Esq., F.R.S.

- C 60. A small but perfect specimen of *Antipathes cupressus*, Ellis. It is 10 inches in height, and the branches are given off at right angles to the stem.

Presented by John Quekett.

- C 61. A delicate specimen of *Antipathes cupressus*, Ellis. The branches drooping from the main stem give it that peculiar weeping character for which the cypress tree is admired.

Presented by John Quekett.

Family *Gorgoniadæ*.

Genus GORGONIA, Linn.

Polype-mass rooted, arborescent, consisting of a central axis barked with a polypiferous crust; the axis horny, continuous and flexible, branched in coequality with the polype-mass; the crust, when recent, soft and fleshy, when dried, porous and friable; the orifices of the polype-cells more or less protuberant.

- C 62. A large-sized specimen of Venus's Fan, *Gorgonia flabellum*, Linn. From the main stems a secondary series of reticulate leaf-branches are developed at right angles; in those parts where they press against each other, are extra deposits of the coloured matter of the crust. A bivalve shell, *Arca Noæ*, is adherent to the base of the stem.

Fig. Ellis's Zooph. p. 92. Esper, tab. 15. Dana's Zooph. p. 655.

Hab. West Indies.

Presented by John Quekett.

- C 63. The *Gorgonia flabellum*, Linn. This specimen is of an irregular many-branched character. Superabundant deposits of the fleshy crust are very marked over the whole specimen, giving it a ragged and somewhat knotty appearance. The colour of the crust is yellow, and that of the axis dark brown. Attached to the base are three specimens of an Alcyonian zoophyte.

Hunterian.

- C 64. A beautiful and very characteristic specimen of the yellow variety of Venus's Fan, *Gorgonia flabellum*, Linn. The polype-cells are arranged in linear series, and are readily distinguished.

Presented by John Quekett.

- C 65. A bifurcate specimen of the yellow variety of *Gorgonia flabellum*, Linn. To the inner side of the larger half is an almost linear deposit of yellow fleshy crust ; this extends from near the centre to the periphery, and is probably a deposit thrown out to repair a fracture.

Presented by John Quekett.

- C 66. The *Gorgonia flabellum*, Linn. On one side this specimen has four small offshoots, the middle ones are united. On the same side the crust is abundant, chiefly on the midribs.

Hunterian.

- C 67. A *Gorgonia flabellum*, Linn. The crust is of a pink colour, and the axis light brown.

Presented by Charles Stokes, Esq., F.R.S.

- C 68. The yellow variety of the *Gorgonia flabellum*, Linn., remarkable for having innumerable branchlets developed on each side, giving it a thick, matted, spicular appearance.

Presented by Charles Stokes, Esq., F.R.S.

- C 69. A small specimen of *Gorgonia flabellum*, Linn., from which the crust has been abraded, and a brown roughened axis is exposed.

Presented by Charles Stokes, Esq., F.R.S.

- C 70. A specimen most probably of the *Gorgonia flabellum*, Linn. It is remarkable for the large interspaces in its reticulations, the branchlets of which are semiflattened, and overlaid with a very thick crust of a cinnamon-brown colour.

Presented by Charles Stokes, Esq., F.R.S.

- C 71. A small specimen of *Gorgonia flabellum*, Linn., consisting of a root, from which two flattened branches are given off, and from the larger one a branchlet. The skeleton is composed of light brown horn, with quadrilateral meshes, and is thickly covered with a crust, in which the principal part is of a pink colour, and the polype-cells or oscules yellow.

Presented by Charles Stokes, Esq., F.R.S.

- C 72 Two small specimens of the same species of *Gorgonia*, in which nearly half the skeleton has been denuded of its crust. It will be seen that the meshes are of quadrilateral figure, and the oscules very apparent, from the yellow colour forming their margin.

Presented by Charles Stokes, Esq., F.R.S.

- C 73. The horny skeleton of the same species of *Gorgonia*, deprived entirely of its earthy crust. *Presented by Charles Stokes, Esq., F.R.S.*
- C 74. A flattened branch of a small species of *Gorgonia*, in which the reticulations of the skeleton are finer, and the crust thicker, in proportion to the size of the axis. It is principally of a rich purple, intermixed with yellow where the oscules occur. *Presented by Charles Stokes, Esq., F.R.S.*
- C 75. A small branched specimen of *Gorgonia*, consisting of a series of radii, each of which gives off on two of its sides small pinnæ, some anastomosing with the pinnæ of adjoining branches, whilst others arch upwards, and terminate in a slightly dilated extremity. The axis or skeleton is of a light colour, and from its opacity would appear to contain earthy matter. The crust is of a brick-red colour, and only in the parts best developed exhibits traces of the polype-cells.
Fig. MS. in Mus. Coll. Surg.
Hab. Singapore. Presented by Charles Stokes, Esq., F.R.S.
- C 76. A small flabelliform specimen of *Gorgonia*, consisting of a main stem of about an inch in length, from which six principal branches are given off; from these pinnæ project on each side, some of which anastomose with adjoining pinnæ but by far the greater number arch upwards, and terminate in a bulbous extremity. The axis is of a light brown colour; the crust yellow; and the oscules, being slightly raised above the surface, give it a granular appearance.
Fig. MS. in Mus. Coll. Surg.
Hab. Singapore. Presented by Charles Stokes, Esq., F.R.S.
- C 77. Two small specimens, probably of the same species of *Gorgonia*, both of which have a more tuberculated appearance, from the greater projection of the oscules. *Presented by Charles Stokes, Esq., F.R.S.*
- C 78. A small flattened specimen of *Gorgonia*, consisting of one single branch, from which two others of diminutive size are given off, like C 71, 72.

The meshes formed by the horny skeleton are of quadrilateral figure, and the crust very thick ; it is of a brick-dust red, without any difference of colour around the oscules.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Seas.

Presented by Charles Stokes, Esq., F.R.S.

C 79. A single branch of a *Gorgonia*, probably the same species as C 74, but differing in colour, being red round the oscules, and the remainder of the crust yellow.

C 80. A flabelliform *Gorgonia*, consisting of a main stalk about an inch in length, from which a series of straight branches are given off; these send off lateral pinnæ at unequal distances, the majority of which unite with those of neighbouring branches, so as to map out elongate quadrilateral spaces; some of these, of small size, are so thickly coated by the crust, as to assume somewhat of a circular form. In all cases where the pinnæ do not unite, they terminate in a bulbous extremity, similar to Nos. C 75, 76. The skeleton is itself horny, and the crust thick; the oscules are only well seen in the periphery.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Seas.

Presented by Charles Stokes, Esq., F.R.S.

C 81. A flabelliform *Gorgonia*, consisting of a root from which two branches are given off; both these expand in one plane, giving off numerous pinnæ, which arch upwards and slightly inwards, but do not anastomose; all the terminal branchlets being well covered with an excess of crust, which gives them a bulbous appearance. The horny skeleton is of a dark brown colour, and very flexible; the crust is but a few shades lighter, and all the newly developed parts exhibit the oscules very well. The main stem and larger branches have one or more longitudinal grooves on their surface.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Seas.

Presented by Charles Stokes, Esq., F.R.S.

- C 82. A portion of a flabelliform *Gorgonia*, *G. reticulata*, Ellis, *G. verriculata*, Esper. The branches are all more or less rounded, of a yellowish stone colour, covered with numerous oscules, very apparent to the unassisted eye, from the crust at the bottom of each polype-cell being of a dark purple colour.

Fig. Esper, tab 35. Ellis, tab. 17. Dana's Zooph. p. 657.

Hab. Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

- C 83. A portion of the periphery of a *Gorgonia*, somewhat like *G. flabellum*, having a horny axis, of a light brown colour, and a yellow crust with polype-cells surrounded with red spicula. The axis is reticulate, the meshes of nearly uniform size, about one-fourth of an inch broad.

Presented by Charles Stokes, Esq., F.R.S.

- C 84. A tall flabelliform *Gorgonia*, in which the branches are much reticulated, and the meshes mostly of a quadrate figure, as in some of the coarser kinds of *G. flabelliformis*. The oscules are very numerous, and are slightly raised above the general surface of the crust. Between some of the reticulations the crust is of an extra thickness, and what in other respects would have been a square hole, has become a round one.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

- C 85. A tall subflabelliform *Gorgonia*, consisting of a black axis, covered by a bright red crust, which is remarkable for the tuberculate character of the numerous oscules. All the branchlets are flattened, and the oscules occur on two opposite sides, but alternately, so that a serrated appearance is produced.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

- C 86. A taller and thinner specimen of probably the same species of *Gorgonia*,

in which the tuberculated character of the crust may be observed, but on a rather smaller scale. The axis is black, the crust of a lighter red.

Hab. Caribbean Sea. *Presented by Charles Stokes, Esq., F.R.S.*

- C 87. A specimen of *Gorgonia* identical with the two preceding, but on a more delicate scale ; the tubercles of the crust are well marked, but the branches are thinner and taller, and the tubercles are therefore a little wider apart. The colour of the crust itself is much the same as the last.

Presented by Charles Stokes, Esq., F.R.S.

- C 88. A small stunted specimen, probably of the same species of *Gorgonia*, in which the tubercles are very closely approximated. The axis is black, and the colour of the crust more inclined to purple.

Presented by Charles Stokes, Esq., F.R.S.

- C 89. A small specimen of *Gorgonia furfuracea*, Esper, *G. retellum*, Lam., having an axis of a light brown colour, and a crust of a dirty white ; the branchlets are very short, numerous, and terminate in an expanded extremity. A small *Avicula* and several Cirripeds have attached themselves to the horny axis.

Fig. Esper, tab. 41. Dana's Zooph. p. 659.

Hab. Indian Ocean. *Presented by Charles Stokes, Esq., F.R.S.*

- C 90. A small specimen of *Gorgonia*, having a black axis and a white crust ; the oscules occur in parallel rows, and each one is surrounded by spicules of a pink colour, which renders their situation very evident. Numerous small *Ophiuræ* may be observed upon many of the branches.

Presented by Charles Stokes, Esq., F.R.S.

- C 91. A small specimen of *Gorgonia*, somewhat allied to *Gorgonia furfuracea*, Esper, but having a label with the name of *G. umbraculum* affixed to it. The axis is nearly black, and the crust of a purple colour, with the oscules standing out in bold relief.

Fig. Ellis's Zooph. p. 8. tab. 10.

Hab. Batavia.

Hunterian.

- C 92. A small flabelliform specimen of *Gorgonia*, probably *G. granulata*, having a central stem of about three-quarters of an inch in length. This specimen, in its general arrangement, resembles C 76, 77. It principally differs in the mode in which the crust is raised around the oscules, so that they project above the surface as a series of cones.

Fig. Esper, tab. 4. Dana's Zooph. p. 660.

Hab. Red Sea.

Presented by Charles Stokes, Esq., F.R.S.

- C 93. A tall flabelliform specimen of *Gorgonia*, probably *G. reticulum*, Pallas. The branches are nearly of uniform size, and mostly arch upwards and inwards, producing a reticulated appearance; the oscules are of large size, and project slightly beyond the crust; the axis is black, and the crust of a light brown colour, inclining to red.

Fig. Dana's Zooph. p. 656. Esper, tab. 44.

Hab. Singapore.

Presented by Charles Stokes, Esq., F.R.S.

- C 94. A tall flabelliform specimen of *Gorgonia*, consisting of a main stem or axis, from which one branch of considerable size is given off; this sends off numerous short branchlets on the inner side principally, and all of them are covered with a thick crust of a delicate pink colour, in which the oscules for the polypes are very evident. Traces of a median furrow are visible in some of the branches.

Fig. MS. in Mus. Coll. Surg.

Hab. Red Sea.

Presented by Charles Stokes, Esq., F.R.S.

- C 95. A large specimen of *Gorgonia verrucosa*, Linn. When first obtained, it was of a light pink colour; exposure to light has deprived it of this colorization.

Fig. Esper, tab. 16. Johnston's Brit. Zooph. p. 182. pl. 25.

Hab. British Islands. Guernsey.

Presented by Edward Buckland, Esq.

- C 96. The *Gorgonia verrucosa*, Linn. Portions of its fleshy crust are removed, and the horny axis, of a light brown colour, is well seen.

Hab. British Islands. Guernsey.

Presented by Charles Stokes, Esq., F.R.S.

- C 97. Three tall branching specimens of *Gorgonia verrucosa*, Linn., each attached to a rounded nodule of rock.
Hab. South coast of England. *Purchased.*
- C 98. A stunted specimen of *Gorgonia verrucosa*, Linn.
Hab. South coast of England.
Presented by Charles Stokes, Esq., F.R.S.
- C 99. A small specimen of *Gorgonia verrucosa*, Linn., of a light brown colour.
Presented by Charles Stokes, Esq., F.R.S.
- C 100. A small fan-shaped specimen of *Gorgonia verrucosa*, Linn. The lower part of the axis is deprived of its crust.
Hab. Plymouth Sound. *Presented by T. H. Stewart, Esq.*
- C 101. A small branching *Gorgonia*, *Gorgonia umbratica*, Esper, consisting of a black axis and brown crust. The polype-cells are very numerous, stand out boldly from the crust, and arch upwards.
Fig. Dana's Zooph. p. 660. Esper, tab. 20.
Hab. East Indies. *Presented by Charles Stokes, Esq., F.R.S.*
- C 102. A larger specimen of *Gorgonia umbratica*, Esper, in which the root of the axis is shown, and this, like Esper's figure, is of a light brown colour, the other portions being black.
Presented by Charles Stokes, Esq., F.R.S.
- C 103. Three large specimens of *Gorgonia umbratica*, Esper, each having its root quite perfect. *Presented by Charles Stokes, Esq., F.R.S.*
- C 104. A small *Gorgonia*, very like the preceding in the general arrangement of the branches and branchlets; but the oscules are rounded, and do not arch upwards; the crust is of a redder colour, and each oscule exhibits plainly the cell for the polype.
Presented by Charles Stokes, Esq., F.R.S.

- C 105. A small fragment of the same species of *Gorgonia*, in which the polype-cells are well seen, and the crust is of a brick-red colour.

Presented by Charles Stokes, Esq., F.R.S.

- C 106. A strong specimen of *Gorgonia*, having branches and branchlets like *G. umbraculum*. The axis is light brown, and covered by a thick crust composed of two colours, red and yellow, the former being principally arranged round the polype-cells, the latter making up the entire thickness of the crust, so that between the two a kind of harlequin appearance is produced.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Seas.

Presented by Charles Stokes, Esq., F.R.S.

- C 107. A fine specimen of *Gorgonia*, which in the general arrangement of its branches is very like *G. umbraculum*. The axis is of a light brown colour, the crust of a rich purple-brown. In some of the larger branches a median furrow exists; but the polype-cells are very minute, and on the smaller branches are surrounded by an elevated portion of the crust, giving it a granular appearance.

Hab. Bay of Caraccas; low-water.

Presented by Charles Stokes, Esq., F.R.S.

- C 108. The *Gorgonia Antipathes*, Linn., *Plexaura Antipathes*, Lamour. This is a large and characteristic specimen of the species; the black flexuously striate axes, the thick smooth cortex, and numerous oscules make it easily recognizable.

Fig. Esper, tab. 24, 25. Lamour. Pol. flex. 434; Encyc. 380. Dana's Zooph. p 667.

Hab. Indian Ocean.

Hunterian.

- C 109. A small specimen of the *Gorgonia Antipathes*, Linn. It is attached to a piece of coral, to which also are fixed two branches of a *Gorgonia flabellum*. This *G. Antipathes* differs from the last in size, and in the oscules being

larger and more oval in figure. On some of the larger stems is a purple deposit of crust, which forms an inner layer to the cinereous cortex.

Purchased.

- C 110. A *Gorgonia Antipathes*, Linn. Very similar to the preceding specimen.
Hab. Cuba. *Presented by Charles Stokes, Esq., F.R.S.*

- C 111. A specimen of *Gorgonia Antipathes*, Linn., from which a great part of the cortex has been removed, exposing the black and finely striated axis; the cortex on its outer surface is of a dull purple hue. *Hunterian.*

- C 112. A branch of the *Gorgonia Antipathes*, Linn., from which the cortex has been partly removed. *Purchased.*

- C 113. The black horny axis of a very large specimen of *Gorgonia Antipathes*, Linn. The base of the stem is very thick. Here and there throughout the branches are little cup-like elevations, produced by an effort on the part of the zoophyte to enclose parasitic cirripeds. The spiral direction of the rugæ on the stem and branches is well seen. *Purchased.*

- C 114. A tall many-branched specimen of *Gorgonia*, somewhat resembling *G. Antipathes*, having a black axis and a brick-red crust. The polype-cells are of oval figure, small size, and very numerous; the crust itself is exceedingly brittle, and feels rough when the finger is passed over it.
Presented by Charles Stokes, Esq., F.R.S.

- C 115. A large specimen of *Gorgonia aurea*, Quek., attached to a Pinna shell, *Pinna nigrina*. It consists of a black horny axis, covered with a crust of a rich golden hue. On two sides of the crust may be noticed a sinuous line or groove, following the course of the chief stems; the polype-cells, like scattered dots, occupy either sides of these lines.

Fig. MS. in Mus. Coll. Surg.

Hab. Indian Seas.

Purchased.

- C 116. A tall specimen of *Gorgonia aurea*, Quek. In all parts from which the yellow cortex has been removed, the dark coloured axis is seen. Numbers of little Crustaceans remain attached to the stems and branchlets about the centre of the specimen. *Purchased.*
- C 117. Two very similar specimens of *Gorgonia aurea*, Quek. *Purchased.*
- C 118. A smaller but more perfect specimen of *Gorgonia aurea*, Quek. *Purchased.*
- C 119. A *Gorgonia aurea*, Quek., in which the smaller branchlets are not developed. *Purchased.*
- C 120. A *Gorgonia* of the same species, in which the crust is of a dirty yellow colour. *Presented by Charles Stokes, Esq., F.R.S.*
- C 121. A shrubby, freely branching specimen of *Gorgonia aurea*, Quek. (var. *rubra*), attached to the outer margin of the valve of a *Pinna* shell, *Pinna nigrina*. This specimen is strikingly identical with the *Gorgonia aurea*, Quek., except that the crust is of a brownish red, and the grooved lines in some of the thicker stems more numerous.
Fig. MS. in Mus. Coll. Surg.
Hab. Indian Seas. *Purchased.*
- C 122. The *Gorgonia aurea*, Quek. (var. *rubra*). One of the branches has become bent, and its branchlets curiously intertwined with the others. *Purchased.*
- C 123. A small specimen of the same *Gorgonia*, with a crust of a light brown or orange colour. *Presented by Charles Stokes, Esq., F.R.S.*
- C 124. A similar specimen of *Gorgonia*, in which the crust on the smaller branches is yellow, but on the larger ones inclining to orange; when the outer layer of the orange colour is removed, the brilliant yellow is seen below. *Presented by John Quekett.*

- C 125. A tall shrubby specimen of *Gorgonia miniacea*, Esper, having a black horny axis covered by a brick-red crust.
Fig. Esper, tab. 36. Dana's Zooph. p. 662.
Hab. East Indies. *Presented by Charles Stokes, Esq., F.R.S.*
- C 126. A larger specimen of *Gorgonia miniacea*, Esper, having a similar arrangement of the branches; but the axis is of a lighter colour, and the crust of a purplish hue. *Presented by Charles Stokes, Esq., F.R.S.*
- C 127. A small specimen of *Gorgonia miniacea*, Esper, having a light-brown axis and a fawn-coloured crust. In their arrangement, the branches and the polype-cells closely resemble those of the two preceding specimens.
Hab. Manilla. *Presented by Charles Stokes, Esq., F.R.S.*
- C 128. A large specimen of the Fiery-red Gorgon, *Gorgonia flammea*, Ellis. It consists of three main stems and many lateral branches, all of which are more or less flattened.
Fig. Ellis's Zooph. p. 80. tab. 11. Dana's Zooph. p. 662.
Hab. Cape of Good Hope. *Presented by Charles Stokes, Esq., F.R.S.*
- C 129. A smaller specimen of *Gorgonia flammea*, Ellis, remarkable for the rounded condition of its lateral branchlets.
Hab. Cape of Good Hope. *Presented by John Quekett.*
- C 130. The *Gorgonia flammea*, Ellis, consisting of a flattened central stem and numerous lateral branches, all more or less rounded. The base is deprived of its fleshy covering, and is of a light brown hue.
Hab. Cape of Good Hope. *Presented by Charles Stokes, Esq., F.R.S.*
- C 131. The *Gorgonia flammea*, Ellis. The lower part of the stalk is covered with a Sertularian zoophyte, to which numerous sponges and small shells are attached.
Hab. Cape of Good Hope. *Presented by Charles Stokes, Esq., F.R.S.*
- C 132. Four specimens of the *Gorgonia flammea*, Ellis, one of which is re-

markable for the number and twisting of its branches, almost hiding the main stem.

Presented by Charles Stokes, Esq., F.R.S.

- C 133. A specimen of the Fir-like Gorgon, *Gorgonia abietina*, Sol. and Ell., *G. petechizans*, Lamour.

Fig. Esper, tab. 13. Ellis's Zooph. p. 95. tab. 16.

Hab. West coast of Africa, Cape Coast Castle.

Presented by Charles Stokes, Esq., F.R.S.

- C 134. A corresponding specimen of *Gorgonia abietina*, Sol. and Ell.

Hab. West coast of Africa, Cape Coast Castle.

Presented by Charles Stokes, Esq., F.R.S.

- C 135. A small specimen of *Gorgonia abietina*, Ell. and Sol., in which the pinnæ do not branch.

Presented by John Quekett.

- C 136. A small specimen of *Gorgonia abietina*, Ell. and Sol., in which one-half of the pinnæ are branched, the other not.

Presented by Charles Stokes, Esq., F.R.S.

- C 137. The *Gorgonia succinea*, Esper, *Gorgonia pseudo-Antipathes*, Lam., *Eunicea succinea*, Ehrenb.

Fig. Esper, tab. 46. Dana's Zooph. p. 671.

Hab. West Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 138. A branch of the *Gorgonia muricata*, Esper. This specimen is 15 inches in length, and has seven off-shoots from the main stem, equalling it and each other in thickness. The axes are comparatively slender, brown coloured, faintly striated. The crust is pale yellow, very thick, and externally roughened by the polype-cells having serrated edges and being considerably raised above the general surface.

Fig. Esper, tab. 39 A.

Hab. West Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 139. Another specimen of the *Gorgonia muricata*, Esper. This not only differs from the preceding in relative size, but the polype-cells, though of the same shape, are considerably smaller.

Fig. Esper, tab. 8.

Hab. West Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 140. Three specimens of the *Gorgonia muricata*, Esper. The largest has its branches given off chiefly from one side, the lesser rami are dichotomous; at their point of divergence the horny axis is flattened, and presents a delta-like expansion.

Purchased.

- C 141. Two specimens of *Gorgonia placomus*, Esper.

Fig. Esper, tab. 6.

Hab. Unrecorded; probably Curaçoa.

Presented by Charles Stokes, Esq., F.R.S.

- C 142. A thin branching specimen of *Gorgonia*, probably *Gorgonia viminalis*, consisting of a light-brown axis and white crust; the polype-cells are rounded, and arranged in parallel rows.

Presented by Charles Stokes, Esq., F.R.S.

- C 143. A very delicate *Gorgonia*, having a black axis covered with a thin, white, scaly crust: the polype-cells project considerably beyond the crust, and have numerous large spicula around their margin, some of which are clearly visible to the naked eye.

Hab. Caribbean Sea.

Presented by Charles Stokes, Esq., F.R.S.

- C 144. A short stunted specimen of *Gorgonia*, consisting of a light-brown axis, thickly covered with a crust of a purple colour; the polype-cells are very numerous, project upwards and outwards, and are well supported by spicula. The height of the specimen is about six inches, the diameter of the branches about one-fourth of an inch.

Presented by Charles Stokes, Esq., F.R.S.

- C 145. A short stout specimen of *Gorgonia*, somewhat resembling the one last

described ; but the branches are more arched, and the polype-cells more convex, and provided with numerous spicula. The colour of the crust is a dirty purple, the axis of a light brown.

Presented by Charles Stokes, Esq., F.R.S.

- C 146. Two short specimens of *Gorgonia*, each having a black axis and a brown crust, with numerous elongated spicula projecting from the polype-cells ; these are also seen attached to the axis when a portion of the crust has been removed.

Presented by Charles Stokes, Esq., F.R.S.

- C 147. A short stout *Gorgonia*, remarkable for the projection of the polype-cells, which is about one-eighth of an inch ; they are quite rough and angular, from the quantity of spicula entering into their structure.

Presented by Charles Stokes, Esq., F.R.S.

- C 148. A taller and thinner specimen of *Gorgonia*, in which the cells project about one-tenth of an inch from the crust. They exhibit the septa exceedingly well, and are quite rough with spicula.

Presented by Charles Stokes, Esq., F.R.S.

- C 149. A large double-branched specimen of the *Gorgonia petechizans*, Esper, *G. abietina*, Ellis. The main stems in colour are of a streaked yellow and red, the former predominating externally, the latter forming a thin coating underneath. The elevations of the polype-cells are all yellow. *Fig.* Esper, tab. 13. Dana's Zooph. p. 650. Ellis's Zooph. tab. 16. *Hab.* Atlantic, and coast of Africa.

Presented by Charles Stokes, Esq., F.R.S.

- C 150. A flabelliform specimen of *Gorgonia petechizans*, Esper. Whether from alteration or otherwise, this specimen is chiefly of a red hue, the elevated cells yellow ; the larger stems are irregular and knotty.

Presented by Charles Stokes, Esq., F.R.S.

- C 151. The *Gorgonia setosa*, Linn. and Pall. This is a large branching specimen, 3 feet 6 inches in height ; the main stems are irregularly rounded, becoming flattened as they taper upwards, from these last the pinnæ are

given off at an acute angle. The colour of the crust is a dirty yellow with a layer of pink underneath, by which means the polype-cells are well shown. The root is present, and, like the branches, is composed of horny material of a brown colour.

Fig. Esper, tab. 17. Dana's Zooph. p. 650.

Hab. Seas of the North, and the Mediterranean.

Purchased.

- C 152. A short-branched specimen of *Gorgonia setosa*, Linn. The colour of the axis and of the crust agrees with that of the preceding specimen.

Purchased.

- C 153. Two young specimens of the *Gorgonia setosa*, Linn., attached to the valve of a scallop shell.

Presented by John Quekett.

- C 154. A small stunted specimen of *Gorgonia setosa*, Linn., remarkable for the number of branches given off in a small space.

Presented by Charles Stokes, Esq., F.R.S.

- C 155. Two specimens of the horny skeleton of *Gorgonia setosa*, Linn. All the larger branches are black, the smaller ones of a light brown colour. Portions of the crust may be here and there observed; they are all of dirty yellow colour.

Presented by Charles Stokes, Esq., F.R.S.

- C 156. A branched specimen of the Sea-feather, *Gorgonia setosa*, Linn. It has a black axis covered with a purple crust; some of the pinnæ are upwards of 6 inches in length.

Fig. Esper, tab. 17.

Hab. West Indies.

Purchased.

- C 157. A specimen of *Gorgonia setosa*, Linn., consisting of a main stem and two branches, both of a black colour, covered with a dark-purple crust.

Presented by John Quekett.

- C 158. A tall single branch of *Gorgonia setosa*, Linn., which, like the preceding, has a black axis covered with a rich-purple crust. The polype-cells occur principally upon the upper edge of each of the pinnæ.

Presented by Charles Stokes, Esq., F.R.S.

- C 159. A portion of a branch of *Gorgonia setosa*, Linn., the free extremity of which has numerous pinnæ. The axis is black, and the crust purple.

Presented by Charles Stokes, Esq., F.R.S.

- C 160. A portion of a branch of *Gorgonia setosa*, Linn. The axis is light brown, and the crust of a cream colour, overlying a layer of purple. The polype-cells are well shown on each of the pinnæ, especially on those nearest the base.

Presented by Charles Stokes, Esq., F.R.S.

- C 161. An entire specimen of the Sea-willow Gorgon, *Gorgonia anceps*, Linn. (pale variety). The crust is of a sulphur-yellow colour.

Fig. Esper, tab. 7. Ellis's Zooph. p. 89.

Hab. West Indies. Occasionally found on the British coasts.

Presented by Charles Stokes, Esq., F.R.S.

- C 162. A similar, but finer specimen of *Gorgonia anceps*, Linn. The stems are considerably flattened, and the polype-cells, occurring in rows at each margin, are very characteristic.

Presented by Charles Stokes, Esq., F.R.S.

- C 163. Three specimens of *Gorgonia anceps*, Linn. The largest one has lost much of its colour.

Presented by Charles Stokes, Esq., F.R.S.

- C 164. Two branches of *Gorgonia anceps*, Linn. The purple shade of the species, as given in Esper's plate, is well shown in both; they are dichotomously branched, and on the thin edges the polype-cells are disposed in parallel rows.

Presented by Charles Stokes, Esq., F.R.S.

- C 165. A small shrub-like specimen of *Gorgonia*, from 2 to 3 inches in height, consisting of a root from which a considerable number of stems and branches are given off, all of which arch upwards and inwards; the axis is of a brown colour, the crust purple, very thick, and rounded, with numerous small oscules scattered irregularly over all parts of the surface.

Presented by Charles Stokes, Esq., F.R.S.

- C 166. A small *Gorgonia*, somewhat like the preceding, but with a white crust, having the branches more flattened, and the oscules more plainly marked.

Presented by John Quekett.

- C 167. Two small *Gorgoniæ*, very much resembling the *Gorgonia* C 74, but in both the crust is white ; the roundness of the axis and crust is also like that specimen.

Presented by John Quekett.

- C 168. A small *Gorgonia*, having a dark-brown axis, with a thick crust of a brilliant crimson colour. The crust on some of the branches has been partially removed, and the polype-cells, which are only sparingly shown in the outer layer, are very evident in the inner one.

Presented by John Quekett.

- C 169. Two small specimens of *Gorgonia citrina*, Esper, *Pterogorgia citrina*, Dana, each having a black axis, with a thick flattened crust of a yellow or citron colour, and the oscules disposed in a single series on one edge only, and this edge marked with purple.

Fig. Dana's Zooph. p. 648. Esper, tab. 38.

Hab. Cape Florida. West Indies. British coast.

Presented by Charles Stokes, Esq., F.R.S.

- C 170. A small thick-set *Gorgonia*, termed *G. citrina*, in which the axis is black, the crust thick and yellow, with large prominent tubercles ; in some respects it resembles the specimen last described, but differs from it principally in the colour of the crust.

Fig. Esper, tab. 38.

Hab. Brazil.

Presented by Charles Stokes, Esq., F.R.S.

- C 171. An expanded *Gorgonia*, *G. dilatata*, Esper. The crust is of a bright yellow colour.

Fig. Esper, tab. 51.

Hab. Cuba.

Presented by Charles Stokes, Esq., F.R.S.

- C 172. An expanded *Gorgonia*, precisely like *G. dilatata*, Esper, but the crust is of a dull purple colour.

Hab. Cuba.

Presented by W. S. Mackay, Esq., to Charles Stokes, Esq., F.R.S.

- C 173. The orange-coloured Sea Whip, *Gorgonia juncea*, Ellis. The axis is smaller at either extremity than in the middle; it is quite black, and attached by one extremity to a valve of a small pink mussel. The crust is flattened on two sides, and is of a yellow colour in the centre, with a purple margin, in which may be seen the numerous openings of the polype-cells.

Fig. Ellis's Zooph. p. 81. Esper, tab. 52.

Hab. East Indies. *From the Museum of the late Robert Brown, D.C.L.*

- C 174. A series of specimens of *Gorgonia juncea*, Ellis, each of which is attached to the outer part of the valve of a small pink mussel.

Presented by T. Ingall, Esq.

- C 175. A series of smaller specimens of *Gorgonia juncea*, Ellis. The greatest part of these have the fleshy crust adherent; and each is affixed to the valve of a pink mussel.

Hab. South America, Caraccas.

Presented by Charles Stokes, Esq., F.R.S.

- C 176. Two specimens of the horny axis of *Gorgonia juncea*, Ellis. One is attached to the shell of a mussel, the other to that of a *Cardium*. The axes of these differ from the preceding specimens in giving off branches, two in one specimen, and one in the other.

Purchased.

- C 177. A delicate whip-shaped specimen of *Gorgonia*, about 18 inches in height, and none of the branches exceeding one-tenth of an inch in diameter. The axis is black and horny, the crust of a beautiful pink colour, flattened, and with a row (or, in some cases, two rows) of oscules on two of its sides. The main stem is exceedingly small, and the branches, which are numerous, are larger in the middle than at either extremity.

Presented by Charles Stokes, Esq., F.R.S.

- C 178. Six specimens of the horny axis of a small species of *Gorgonia*, each having more or less of a white crust or coating upon them. None of

them exceed 6 inches in height ; and each one has its expanded portion or root preserved.

Hab. Cuba.

Presented by Charles Stokes, Esq., F.R.S.

- C 179. Three specimens of *Gorgonia Sasappo*, Pallas. One of these has in great part been deprived of its crust, the dark-coloured axis alone remaining.

Fig. Esper, tab. 9. Dana's Zooph. p. 663.

Hab. Indian Ocean.

Purchased.

- C 180. A small *Gorgonia*, allied to *G. Sasappo*, Pallas, having a horny axis and a purple crust ; it is attached to a pebble, the upper surface of which is almost covered by the expanded root.

Presented by John Quekett.

- C 181. A complete specimen of *Gorgonia juncea*, Pallas, measuring about 60 inches in length. The brilliant scarlet colouring of the crust is well retained.

Fig. Esper, tab. 52. Ellis's Zooph. p. 81. Dana's Zooph. p. 664.

Hab. Indian Ocean.

Purchased.

- C 182. A similar but smaller specimen of *Gorgonia juncea*, Pallas. Many inches of the crust, from the tip downwards, have been stripped off, leaving the striated axis bare. It is much faded, and of a dirty fawn-colour.

Purchased.

- C 183. A portion of the stem of *Gorgonia juncea*, Pallas, about 18 inches in length. The lower end is covered with a thick crust of the same colour as the last ; whilst the upper has been deprived of it, and two projecting masses of horny material, similar to the axis itself, have been thrown out, which, when covered with the crust, must have had the appearance of branches.

Purchased.

- C 184. The forked Gorgon, *Gorgonia elongata*, Esper. It consists of a short, broad stem, from which seven main branches arise ; these, after proceeding about 6 or 7 inches, give off a branch, which proceeds up-

wards, nearly parallel with the main stem, and almost equal to it in thickness. The crust is of a vermilion colour, and the polype-cells are very numerous, and arranged in alternate rows, especially towards the free extremities of the branches, which are all more or less flattened. The axis is of a light yellow colour, and of small size in comparison with the crust.

Fig. Esper, tab. 55. Ellis's Zooph. p. 98. Dana's Zooph. p. 664.

Hab. West Indies.

Hunterian.

- C 185. Two branches of a *Gorgonia*, probably *G. elongata*, both of which are bifurcate, consisting of a calcareous striated axis, with a light-brown tuberculated crust. *Presented by Charles Stokes, Esq., F.R.S.*

- C 186. A branch of *Gorgonia pinnata*, Quek. It is composed of two primary stems, from which a series of secondary and smaller-sized ones branch off on one side only, and that at an acute angle. The axes are pale-coloured and minutely striated; crust reddish.

Fig. MS. Mus. Coll. Surg.

Presented by John Quekett.

- C 187. A branch of *Gorgonia pinnata*, Quek., in which the branchlets are given off from one side only. The crust is of a yellowish colour, and is partly removed from some of the branchlets; and in these parts the light axis is well shown. *Presented by John Quekett.*

- C 188. A mass of rock, to which two specimens of *Gorgonia pinnata*, Quek., are attached: these are about 18 inches in height; and branches of equal size are given off at intervals of about half an inch, and on one side of the stem only. A portion of the crust remains, and is of a yellow colour; the axis itself is exceedingly brittle, striated on its surface, and of chalky whiteness.

Fig. MS. Mus. Coll. Surg.

Purchased.

- C 189. A flabelliform *Gorgonia*, *G. zinziber*, Quek., remarkable for the large size of the branchlets, which are so much contorted as to form a coarse

network without anastomosing. The axis is of large size, yellow, and very soft, and the crust is also yellow and tough.

Fig. MS. Mus. Coll. Surg.

Hab. Unrecorded.

Presented by John Quekett.

- C 190. Several small portions of the branchlets of probably the same species of *Gorgonia*, which have been detached from each other, but are placed somewhat in proper order upon the card supporting them. The axis precisely resembles that of *G. zinziber*, but the crust is nearly black.

Presented by Charles Stokes, Esq., F.R.S.

- C 191. Two small fragments of an allied species of *Gorgonia*, probably *G. suberea*, which is very rough and of the colour of cork: there is not much distinction between axis and crust; but some portions of the latter have rounded elevations or verrucæ, with a central opening, as though they were the abodes of polypes.

Fig. MS. Mus. Coll. Surg.

Hab. Unrecorded.

Presented by Charles Stokes, Esq., F.R.S.

- C 192. A portion of a large *Gorgonia*, *G. suberea*, in which the axis externally resembles wood, and is partially covered with a thick crust approaching cork both in colour and general appearance. The polype-cells are numerous, and extend through the entire thickness of the crust, but the external opening is smaller than any other part.

Presented by Charles Stokes, Esq., F.R.S.

- C 193. A tall branching specimen of *Gorgonia granulata*, Ehrenberg, consisting of a light-coloured brittle axis, covered with a yellowish crust, which is remarkable for the white wart-like projections or granulations on its surface, these being the abodes of the polypes. The branchlets are of small size, and so close together that they appear to form a network.

Fig. Dana's Zooph. p. 660.

Hab. East Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 194. Fragments of the branchlets of the same species of *Gorgonia*, in which the white wart-like projections are well shown.

Hunterian.

- C 195. A very delicate *Gorgonia*, probably of the same species as the one last described. The axis is of a light colour, and the crust dark yellow, with the verrucæ white.

Fig. Dana's Zooph. p. 660.

Hab. East Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 196. A tall *Gorgonia*, probably *G. granulata*, Ehrenberg, having the same characters as the two preceding specimens, but more coarsely developed. Twined amongst some of the smaller branches may be observed several specimens of *Ophiuræ*, which are remarkable for the tubercles on their arms resembling the verrucæ or wart-like projections for the polypes on the branchlets of the Zoophyte. So nearly do these assimilate to each other, that at first sight the *Ophiuræ* are hardly perceptible.

Fig. Dana's Zooph. p. 660.

Presented by John Quekett.

- C 197. The peripheral portion of a *Gorgonia* probably allied to *G. granulata*, Ehrenberg, in which the verrucæ are well shown; they project from the crust, and each one exhibits the septa for the polype as plainly as some of the large stony corals of the genus *Oculina*.

Presented by Charles Stokes, Esq., F.R.S.

- C 198. Three small specimens of the same *Gorgonia*, all of which very much resemble the branchlets in C Nos. 193, 194. The axis is black, the crust purple, and the oscules rounded and projecting above the general surface of the crust very conspicuously.

Presented by Charles Stokes, Esq., F.R.S.

- C 199. A small shrub-like *Gorgonia*, probably allied to *G. granulata*, in which the axis is nearly black, the crust purple, and the oscules not only considerably raised above the general surface of the crust, but most of them showing the septa for the polypes. The branches are all traversed by a median furrow; but in the branchlets the two sides of the furrow have coalesced, so that the furrow is converted into a ridge.

Fig. M.S. Mus. Coll. Surg.

Presented by Charles Stokes, Esq., F.R.S.

- C 200. The *Gorgonia Americana*, Gmelin. *G. pinnata*, Ellis and Soland. *Pterogorgia stricta*, Ehrenb. This specimen is about 10 inches high, and consists of an axis of a stone-colour grooved on two opposite sides; the crust is very thin, of a yellowish tinge, with the polype-cells arranged in alternate rows on each side of the median groove.

Fig. Dana's Zooph. p. 650. Quekett's Lectures on Histology, vol. ii. p. 124.

Hab. West Indies.

Hunterian.

- C 201. A thick-branched specimen of *Gorgonia* allied to *G. Americana*; consisting of an axis of a light stone-colour, and having a quantity of calcareous material entering into its composition. The crust is thick and of a brick-red colour, and every branch exhibits a well-marked furrow. The polype-cells are arranged in alternate rows, on the sides of the branches, and each one is surrounded by a slightly elevated margin, like *G. Americana*. The branchlets are given off chiefly on the inner side of the branches.

Fig. Ellis's Zooph. p. 82.

Hab. West Indies.

Presented by John Quekett.

- C 202. A smaller specimen of the same *Gorgonia*, in which the crust is very thick and the median furrow well marked, even to the tips of the branchlets. The stellate septa around the margins of the oscules are very well shown.

Presented by John Quekett.

- C 203. A tall specimen of *Gorgonia* of a light stone-colour, having a general resemblance to *G. Americana*; the axis is of a light hue and feels calcareous, and the crust has a well-marked median furrow on each of its sides. The polype-cells or oscules are not very numerous, but they are well raised above the general surface of the crust.

Fig. Ellis's Zooph. p. 82.

Hab. West Indies.

Presented by Charles Stokes, Esq., F.R.S.

- C 204. Two small specimens probably of *Gorgonia Americana*, in which the smoothness and colour of the crust, the median furrow and polype-

cells are all well marked, the principal difference being in the size of the specimens themselves. *Presented by Charles Stokes, Esq., F.R.S.*

- C 205. Four still smaller specimens of *Gorgonia Americana*, all presenting characters similar to the above; in one of them the axis is of a darker colour than in the rest, but the general arrangement of the branches agrees in every respect.

Presented by Charles Stokes, Esq., F.R.S.

- C 206. A small erect *Gorgonia*, probably *Gorgonia Americana*, resembling the two last-described specimens in every particular except in colour, the crust being of brick-dust-red. *Presented by Charles Stokes, Esq., F.R.S.*

- C 207. A specimen of *Gorgonia verticillata*, Linn. The branches have been broken off the lower part of the stem.

Fig. Esper, vol. ii. tab. 42. Ellis's Zooph. p. 83.

Hab. Mediterranean Sea. *Presented by Charles Stokes, Esq., F.R.S.*

- C 208. Fragments of the periphery of *Gorgonia verticillata*, Linn.

Presented by Charles Stokes, Esq., F.R.S.

- C 209. The Axis probably of *Gorgonia verticillata*, Linn. It is in great part deprived of its crust, even to the minute branchlets, which latter are of a yellowish-fawn colour. Many of these last have been broken off, and present on two sides a row of alternate short spine-like processes.

Presented by Charles Stokes, Esq., F.R.S.

Genus MELITÆA, Lamour.

Corals consisting of an alternation of calcareous and suberose joints.

- C 210. A fine specimen of the Jointed Red Coral, *Melitæa ochracea*, Lamour., *Isis ochracea*, Linn. All parts of the calcareous axis are red, but the fleshy crust is yellow, and is in no situation so thick but that the joints can be seen through it. Nearly all traces of joints are obli-

terated in the thick axis, whereas they are well marked in the smaller branches.

Fig. Ellis's Zooph. p. 106. Phil. Trans. vol. 1. Esper, vol. ii. tab. 2.

Hab. Indian Seas. Singapore.

Presented by John Quekett.

- C 211. A large specimen of the base of *Melitæa ochracea*, Lamour., with a portion of the rock to which it was attached. This rock is almost entirely covered with a thin coating of the Zoophyte, which is itself again covered with sponges and corals. No traces of the joints are visible in the larger stems, but they are very evident in the smaller ones. A thin layer of the yellow crust is present in nearly every part, and even those branches broken transversely during life have a yellow pellicle, and can readily be distinguished from those fractured subsequently, by the presence of the crust.

Presented by John Quekett.

- C 212. The root or base of attachment of a large-sized *Melitæa ochracea*, Lamour.; being the specimen from which the longitudinal and transverse sections, C 216, 217, were taken. At its summit is seen a transverse view of the stem, which, although porous, is capable of receiving a tolerable polish.

- C 213. A well-marked specimen of *Melitæa ochracea*, Lamour., but not exhibiting the yellowish crust significant of the species; it is alone of a scarlet hue. This individual specimen is interesting, as having been the one from which Mr. Ellis's drawing was taken.

Hunterian.

- C 214. Two small fan-shaped specimens of the pale variety of *Melitæa ochracea*, Lamour. When clean they were of a cream-colour, produced, as in the yellow kind, by a superficial coating of calcareous matter.

Fig. Ellis's Essay on Corals, plate 39.

Hab. East Indies.

Purchased.

- C 215. A series of pieces of the *Melitæa ochracea*, Lamour., with and without the yellow external coating. *Purchased.*
- C 216. A longitudinal section of the stem of *Melitæa ochracea*, Lamour. It shows a somewhat irregular series of transverse and dichotomous markings, of a yellowish and buff tint, their forked extremities in part assuming a network appearance. These represent the formerly elastic horny joints, which in process of growth receive an addition of calcareous matter, like that seen on the outer circumference of a red colour, and ultimately the joints become more or less solid and unyielding. An offshoot from the stem presents the same aspect. At one extremity is a cavity, in which a shell was lodged, and attached to the outer circumferential crust are one or two Barnacles. *Purchased.*
- C 217. Two transverse sections of the stem of *Melitæa ochracea*, Lamour. They each exhibit pale-coloured, scroll-like, sinuous tracings, being the remaining marks of the former joints as seen in this view; these terminate about a line from the circumference, the outer crust being the secondary deposit. Numerous minute depressions are seen, and a large smooth-walled, conical-shaped oval cavity containing a shell. *Purchased.*
- C 218. The Dwarf Scarlet Melitæa, *Melitæa coccinea*, Lamk., *Isis coccinea*, Ellis and Sol. Both stem and crust are of a rich crimson colour, and the joints very apparent in all the larger branches.
Fig. Ellis and Sol. p. 107. tab. 12. f. 5. Esper, tab. 10. Dana's Zooph. p. 683.
Hab. Indian Ocean, New Holland.
Presented by Charles Stokes, Esq., F.R.S.
- C 219. A specimen of *Melitæa coccinea*, Lamk., consisting of a main stem from which four large crooked branches arise; the polype-cells are very abundant on all the smaller branches, and each one has a circle of yellow spicules on its margin. *Presented by Charles Stokes, Esq., F.R.S.*

- C 220. Four specimens of *Melitæa coccinea*, Lamk., in all of which the crust is in a mealy condition, and in great part crumbling off.
Hab. East Indies. From Bencoolen in Sumatra, collected by Mr. William Bell. *Hunterian.*
- C 221. The yellow variety of *Melitæa coccinea*, Lamk., in which the axis is scarlet and the crust only of a yellow colour. The polype-cells are very numerous, having red spicules in the centre, and a yellow coating around them. *Presented by Charles Stokes, Esq., F.R.S.*
- C 222. A small specimen of *Melitæa coccinea*, Lamk., remarkable for the richness of the yellow hue. *Presented by Charles Stokes, Esq., F.R.S.*
- C 223. Four small specimens of *Melitæa coccinea*, Lamk., which, like the red specimens C 220, have lost a considerable portion of their crust, and are in a very brittle condition.
Hab. Sumatra. Collected by Mr. William Bell. *Hunterian.*
- C 224. A small specimen of the white variety of *Melitæa coccinea*, Lamk., differing from the yellow kind in having the axis of a white, not of a red colour, although the superficial coating is itself of a yellow hue.
Presented by Charles Stokes, Esq., F.R.S.
- C 225. A specimen of the orange-coloured variety of *Melitæa aurantia*, Esper. This species is peculiar in having a reddish stem, the superficial layer being of an orange tint.
Fig. Esper, tab. 10.
Hab. Sumatra. Collected by Mr. William Bell. *Hunterian.*
- C 226. A species of *Melitæa*, which in external appearance very much resembles *Melitæa ochracea*, Lamour., and *M. coccinea*, Lamk.
Fig. Quekett, MS. in Coll. of Surg.
Hab. East Indies. *Presented by Charles Stokes, Esq., F.R.S.*
- C 227. A small straight specimen of *Melitæa*, having a thin reddish-coloured

crust. The joints are at a greater distance apart than in *Melitæa ochracea*, which in other respects it very much resembles.

Hab. Island of Somma. New Hebrides group.

Presented by Charles Stokes, Esq., F.R.S.

- C 228. A small fawn-coloured specimen of the *Melitæa coccinea*, Lamk. A portion of the crust has been removed near the base, and the calcareous axis is well shown ; its colour is much lighter than that of the crust.

Presented by Charles Stokes, Esq., F.R.S.

- C 229. Three specimens of the bony axis of a species of *Melitæa*. They are of a rich purple hue, very brittle, and without any trace of joints.

Presented by Charles Stokes, Esq., F.R.S.

Genus ISIS, Linn.

Corals consisting of corneous and calcareous joints alternately : branches proceeding from the calcareous joints ; cortex thick, deciduous.

- C 230. The black and white jointed Coral, *Isis hippuris*, Linn. The axis is covered with a thick crust of a dirty brown colour, in which the polyp-cells are seen as so many minute foramina.

Fig. Ellis's Zooph. p. 105. tab. 3. Esper, tab. 1-3.

Hab. Mediterranean, East Indies, Sumatra.

Hunterian.

- C 231. A small specimen of *Isis hippuris*, Linn., from which the crust has been entirely removed ; the axis is composed of alternate joints of horny and calcareous matter.

Presented by John Quekett.

- C 232. A large specimen of *Isis hippuris*, Linn., with the external crust removed, showing the union of many of the small and of the larger branches. The main portions of the stem exhibit no trace of the joints externally.

Presented by Benjamin Travers, Esq., F.R.S.

- C 233. A series of specimens of the calcareous axis of *Isis hippuris*, Linn., which have been divided vertically and transversely, to show their

internal structure. In the largest joints portions of the horny matter still remain.

Presented by John Quekett.

- C 234. A terminal branch of *Isis hippuris*, Linn., the growth of which has been interfered with, and three flattened branchlets developed from it, so as to cover a space 4 inches broad. It is thus described in the Sale Catalogue of the Portland Museum:—"A fine specimen of the base or root of the *Isis hippuris*, L., which is white and not jointed, with the black woody-like part as in the stem and branches: the part that was next the body it was taken from, quite flat. It is not figured by any author, and is extremely rare."

Hunterian.

Subgenus CORALLIUM, Cuv.

- C 235. A mass of rock upon which a large specimen of the True Red Coral, *Corallium rubrum*, Cavolini, *Gorgonia nobilis*, Ellis, has grown. It consists of a short trunk, from which three principal branches are given off, and these are still covered with the fleshy crust, in which the polype-cells are very evident. Two small specimens are placed by the side of the larger one, and show the colour of the axis when the crust is removed.

Fig. Ellis's Zooph. p. 90. tab. 13. fig. 3. Dana's Zooph. p. 640.

Hab. Mediterranean Sea.

Purchased.

- C 236. The shell of a Sessile Barnacle, almost entirely covered with the expanded portion or root of the True Red Coral, *Corallium rubrum*, Cavolini; it has been deprived of its crust, and the red colour is well shown.

Purchased.

- C 237. A group of the True Red Coral, *Corallium rubrum*, Cavolini, attached to a piece of rock. The axis is partly covered with crust, and though both are of a red colour they differ in tint; the axis is also fluted, but has no polype-cells.

Purchased.

- C 238. A piece of the True Red Coral, *Corallium rubrum*, Cavolini. It is of a pale colour, rough and eroded, and partly covered with *Serpulæ*.

Hunterian.

- C 239. Part of the bony axis of the True Red Coral, *Corallium rubrum*, Cavolini, cut into the shape of a pen ; although polished, the longitudinal somewhat spiral markings are yet distinguishable. *Hunterian.*

Family *Tubiporidae*.

Genus TUBIPORA.

Acrogenous *Tubiporidae* ; corolla calcareous, tubular ; tubes fasciculate ; no internal dissepiments.

- C 240. A large specimen of the Organ-pipe Coral, *Tubipora musica*, Linn. It consists of a series of slightly conical tubes, which, after growing to a certain length, have septa developed from their exterior ; the septum of one tube, uniting with that of its neighbours, forms a platform from which other tubes rise.

Fig. Ellis and Sol. tab. 27. Dana's Zooph. p. 633. Cat. of Physiological Series, Nos. 83, 84, & 85.

Hab. Indian Ocean.

Presented by John Quekett.

- C 241. Another large specimen of the Organ-pipe Coral, *Tubipora musica*, Linn.

Hab. Indian Ocean.

Presented by John Quekett.

- C 242. A specimen of the Organ-pipe Coral, *Tubipora musica*, Linn., very similar to the two preceding.

Hab. Indian Ocean.

Presented by John Quekett.

- C 243. A mass of the Organ-pipe Coral, *Tubipora musica*, Linn. This specimen shows very well a lateral view of the tubes and of the septa.

Presented by John Quekett.

- C 244. The Organ-pipe Coral, *Tubipora musica*, Linn. On its upper surface this specimen presents a peculiar cauliflower appearance, produced by the unequal growth of the tubes and septa. The irregularly raised and somewhat round prominences are partially flattened on their free surfaces by the expansion of the septa. The tubes are much smaller in diameter in this than in the preceding specimens. *Purchased.*

- C 245. A nodular fragment of *Tubipora musica*, Linn., much waterworn, in which the interspaces, and many of the tubes themselves, are filled with white calcareous matter, as if a Nullipore had invested it.

Purchased.

Family *Alcyonidæ*.

Genus *XENIA*.

Fleshy *Alcyonidæ*, erect, lobed and subramose ; polypes subacrogenous, budding both at base and from their sides.

- C 246. A large specimen of *Xenia florida*, Dana ; it is of a red colour. The animals belonging to this genus are very fleshy, but the polypidom is strengthened by numerous calcareous spicula, some of which, as may be seen in this and the following specimens, are upwards of half an inch in length.

Fig. Dana's Zooph. p. 606. pl. 57. f. 4. Lesson, Voy. de la Coquille, pl. 1. f. 3. Blainville, Man. 499.

Hab. Feejee Islands.

Presented by Charles Stokes, Esq., F.R.S.

- C 247. Two smaller specimens of *Xenia florida*, Dana.

Presented by Charles Stokes, Esq., F.R.S.

- C 248. A small specimen of *Xenia florida*, Dana.

Presented by Charles Stokes, Esq., F.R.S.

- C 249. A specimen of *Xenia florida*, Dana, dried and flattened on paper. The characteristic rose-colour has faded ; and, from the pressure, the pyriform stalked figure has been destroyed.

Hab. Sandlewood Bay, Feejee Islands.

Presented by Professor Busk, F.R.S.

- C 250. A very small specimen of *Xenia*. It is quite white, and numerous spicula may be seen projecting from every part of its head, where the

polypes were originally present. The spicula are pointed at both extremities, and readily pierce the skin of the fingers when handled.

Presented by Capt. Sir E. Home, Bart., F.R.S.

- C 251. A large specimen of *Xenia*, very much resembling a cauliflower in shape, and consisting of a series of short stems and heads abounding in spicula.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *ALCYONIUM*, Linn.

Polype-mass lobed, incrusting, spongioid; the skin coriaceous, marked with stellated pores; interior gelatinous, netted with tubular fibres, and perforated with longitudinal canals, terminating in the polype-cells, which are subcutaneous and scattered. Polypes exsertile.

- C 252. A vertical section of the polypidom or corallum of *Alcyonium digitatum*, Dill., preserved in fluid. The outer coating, corresponding to the crust in the *Gorgoniadæ*, is of a yellow colour, and abounds in calcareous spicula. The internal portion is white, and traversed by numerous aquiferous canals, all of which communicate with the cells for the polypes, some of which may be seen, extruded on the margin of the specimen.

Fig. Johnston's Brit. Zooph. p. 174. pl. 34.

Hab. On stones and old shells, deep water, common.

Prepared by Mr. H. Goadby.

- C 253. A transverse section of the same species of *Alcyonium*, in which the aquiferous canals in some instances are cut obliquely, in others transversely. The tissue, making up the bulk of the specimen, is well shown; it is transparent, like cartilage, abounding in fibrous tissue, and is further strengthened by calcareous spicula.

Prepared by Mr. H. Goadby.

- C 254. A series of specimens of the Dead Man's Fingers, *Alcyonium digitatum*, Linn. Three principal colours predominate—white yellow, and pink,

and these are more or less due to the abundance of spicula of those different colours occurring in the crust.

Hab. Various parts of the British coast.

Purchased.

- C 255. A large dried specimen of *Alcyonium glaucum*, Quoy and Gaimard, attached to a piece of coral rock. It is 9 inches in length and 7 inches in breadth. The polype-cells are very well shown, and occur at distances of about a line ; between them is a delicate hexagonal network, formed by the interlacement of minute spicula. It is exceedingly brittle, and all parts of the polypidom abound in spicula.

Fig. Dana's Zooph. p. 623. pl. 58.

Hab. Tongatabu.

Purchased.

- C 256. A specimen of *Alcyonium*, very similar to *A. glaucum* in its general characters. It is 7 inches in length, 5 inches in breadth, and upwards of 2 inches in depth ; its edge is much crenated ; but the polype-cells, which are about a line distant, as in the preceding specimen, are much less than half their size. On examination of the base, the aquiferous canals are seen ; they are very much smaller in diameter than those alluded to in *Alcyonium digitatum*.

Purchased.

- C 257. A series of small specimens of the *Alcyonium glaucum*, Quoy and Gaimard.

Hab. Reefs of Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- C 258. Three specimens of *Alcyonium latum*, Dana.

Fig. Dana, p. 623. pl. 58. figs. 6, 7.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- C 259. A smaller specimen of *Alcyonium latum*, Dana, attached to a mass of coral.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- C 260. Three specimens of *Alcyonium murale*, Dana.

Fig. Dana's Zooph. p. 622. pl. 58. fig. 3.

Hab. Tongatabu.

Presented by Capt. Sir E. Home, Bart., R.N.

- C 261. *Alcyonium tricanthinum*, Dana.
Fig. Dana's Zooph. p. 620. pl. 58. fig. 1.
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*
- C 262. *Alcyonium brachycladum*, Dana ; *A. spongiosum*, Esper.
Fig. Dana's Zooph. p. 617. pl. 57. fig. 8.
Hab. Tongatabu. *Presented by Capt. Sir E. Home, Bart., R.N.*
- C 263. An *Alcyonium* allied to the preceding ; probably the *A. tuberculosum* of Quoy and Gaimard.
Fig. Dana's Zooph. p. 618.
Hab. Tongatabu. *Presented by Capt. Sir E. Home, Bart., R.N.*
- C 264. Portions of the *Alcyonium tuberculosum*, Esper.
Fig. Esper, tab. 23.
Hab. Tranquebar. *Presented by Capt. Sir E. Home, Bart., R.N.*

Order III. HELIANTHOIDA.

The *Helianthoida* comprise all the Actinoid polypes, whether entirely fleshy, or such as secrete within their tissues the calcareous skeletons commonly known as Corals. With a few exceptions, they are furnished with one or more circles of retractile tubular tentacula surrounding the oral disc, each circle or series containing some multiple of the number six. Vertical membranous septa converge from the inner wall of the polype-body towards the centre of the visceral cavity, and in the coralligenous polypes these septa secrete the calcareous matter which is deposited in the form of radiating lamellæ—especially characteristic of true coral. The *Helianthoida* increase by ova, fission, or budding, the particular mode of reproduction determining the form of the coral in compound species.

Tribe I. MADREPORACEA.

Polypes with twelve tentacles in one series, gemmiparous, coralligenous, with the rays of the cells six to twelve in number, or obsolete.

Family *Poritidæ*.

Coralla without calicles ; the cells shallow or superficial, and scarcely traceable through the interior of the corallum.

GENUS PORITES, Cuvier.

Coralla glomerate or furcato-ramose ; cells not over a line in diameter (polypes with twelve short tentacles).

C 265. *Porites cribripora*, Dana.

Fig. Dana's Zooph. p. 564. pl. 55. fig. 5.

Hab. South Pacific.

Presented by John Quekett.

C 266. A series of specimens of *Porites clavaria*, Ellis.

Fig. Dana's Zooph. p. 554. Ellis's Zooph. p. 172. tab. 47. fig. 1.

Hab. West Indies.

Hunterian.

C 267. *Porites furcata*, Lam.

Fig. Dana's Zooph. p. 555.

Hab. West Indies.

Presented by John Quekett.

C 268. *Porites informis*, Dana.

Fig. Dana's Zooph. p. 565. pl. 55. fig. 6 *a, b, c*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart.

C 269. A similar specimen of *Porites informis*, Dana.

Purchased.

C 270. *Porites fragosa*, Dana.

Fig. Dana's Zooph. p. 563. pl. 55. fig. 9.

Hab. Feejee Islands.

Presented by John Quekett.

C 271. *Porites conglomerata*, Lam.

Fig. Dana's Zooph. p. 561. pl. 53. fig. 3.

Hab. Pacific and Indian Oceans.

Purchased.

C 272. A fragment, probably of *Porites conglomerata*.

Hunterian.

Family *Favositidæ*.Genus *POCILLOPORA*, Lam.

Coralla with the branches never terete ; surface usually verrucose, and cells traceable within, except when quite slender ; texture mostly very compact ; lamellæ nearly obsolete.

C 273. A fragment of *Pocillopora cespitosa*, Dana.

Fig. Dana's Zooph. p. 525. pl. 49. figs. 5 & 5a.

Hab. Pacific Ocean.

Presented by Capt. Sir E. Home, Bart.

C 274. Two specimens of *Pocillopora brevicornis*, Lam.

Fig. Dana's Zooph. p. 526. pl. 49. fig. 8.

Hab. East Indies.

Presented by John Quekett.

C 275. A fine spreading specimen of *Pocillopora damicornis*, Lam.

Fig. Dana's Zooph. p. 527. pl. 49. figs. 7 & 7a.

Hab. Tropical Seas.

Presented by John Quekett.

C 276. A massive specimen of *Pocillopora damicornis*, Lam.

Presented by John Quekett.

C 277. *Pocillopora damicornis*, Lam.

Presented by John Quekett.

C 278. A stout branch (part of a large specimen) of *Pocillopora damicornis*, Lam.

Presented by John Quekett.

C 279. Portion of a specimen of *Pocillopora damicornis*, Lam. ; branches destroyed on one side.

Purchased.

C 280. An erect branch of the preceding species.

Presented by John Quekett.

C 281. A specimen of *Pocillopora damicornis*, Lam., denuded of its branchlets, and showing the massive growth of the main branches.

Purchased.

C 282. A series of fragments of the preceding species.

Presented by John Quekett.

- C 283. Two specimens (portions) of *Pocillopora favosa*, Ehr.

Fig. Dana's Zooph. p. 528. pl. 50. fig. 1.

Hab. Pacific Ocean.

Presented by John Quekett.

- C 284. A worn specimen of probably the same species.

Presented by John Quekett.

- C 285. A fine typical specimen of *Pocillopora bulbosa*, Ehr.

Fig. Dana's Zooph. p. 527. pl. 49. fig. 6.

Hab. East Indies.

Purchased.

- C 286. A slender branching variety of *Pocillopora bulbosa*, Ehr.

Presented by John Quekett.

- C 287. Another variety of *Pocillopora bulbosa*, Ehr., having the branches everywhere digitato-palmate, and generally depressed.

Presented by John Quekett.

- C 288. A portion of a branch of *Pocillopora verrucosa*, Lam.

Fig. Dana's Zooph. p. 529. pl. 50. figs. 3, 3 a.

Hab. Tropical Seas.

This species grows in large hemispherical clumps, consisting of compressed branches, separated by regular intervals of about half an inch ; the verrucæ are sometimes absent on the lower part of the branches.

Presented by John Quekett.

- C 289. *Pocillopora elegans*, Dana.

Fig. Dana's Zooph. p. 532. pl. 51. fig. 1.

Hab. Feejee Islands.

A good specimen. The remains of the fleshy crust may be seen in a dry state on the lower part of the coral.

Purchased.

- C 290. *Pocillopora grandis*, Dana.

Fig. Dana's Zooph. p. 533. pl. 51. fig. 2 a, b, c.

Hab. Feejee and Society Islands.

A fine specimen, having the whole surface coloured with the dried fleshy matter ; the verrucæ are largely developed.

Purchased.

- C 291. A fragment of one of the branches of the above species, with the animal matter destroyed. *Hunterian.*

- C 292. *Pocillopora plicata*, Dana.

Fig. Dana's Zooph. p. 534. pl. 50. figs. 7 & 7 *a, b, c, d.*

Hab. Islands in the Pacific Ocean.

This specimen is a portion of one of the folia which grow in hemispherical clumps, as in *P. grandis*, but are here thinner, and with fewer verrucæ. *Presented by John Quekett.*

Genus ALVEOPORA, Blainv.

Glomerate or furcato-ramose ; coralla spongy ; cells contiguous with the sides, very thin, and thickly pierced with holes ; transverse septa remote.

- C 293. *Alveopora spongiosa*, Dana.

Fig. Dana's Zooph. p. 513. pl. 48. figs. 3 & 3 *a, b, c, d.*

Hab. Feejee Islands.

A fine specimen of irregular lobato-glomerate growth, with a light and spongy texture. *Purchased.*

- C 294. *Alveopora retepora*, Ellis.

Fig. Dana's Zooph. p. 512.

Hab. Locality unknown.

This is an extremely young specimen, apparently of the species described by Ellis. *Hunterian.*

- C 295. *Alveopora fenestrata*, Lam.

Fig. Dana's Zooph. p. 514.

Hab. Southern Ocean.

This species consists of numerous lobed branches, springing from a common base ; the cells show well the peculiar characters of the genus, having their walls thickly perforated, and the lamellæ represented by rows of converging threads. *Purchased.*

Family *Madreporidæ*.

Cells of corallum very deep, and not crossed by septa within.

Genus MANOPORA, Dana.

Foliaceous, glomerate or subramose, never arborescent, and branches not terete, having short tentacles, often alternately large and small, and no apical parent-polype distinguishable. Corallum with the calicles irregular, often spinuloso-laciniate, often wholly obsolete.

C 296. *Manopora grandifolia*, Dana.

Fig. Dana's Zooph. p. 499. pl. 45. figs. 1 & 1 *a, b, c, d.*

Hab. East Indies.

This specimen is a large convoluted mass, for the most part free, but with some portion of it encrusting a dead *Madrepora*.

The general surface of the coral is much roughened from the spinulous prolongations of the margins of the calicles.

The genus contains numerous species, which are principally confined to the Old World.

Presented by J. E. Gray, Esq., Ph.D., F.R.S.

Genus MADREPORA, Linn.

Branches with an apical calicle, and distinct lateral calicles upon the branchlets.

Cells deep, six to twelve radiating points within, which are sometimes obsolete.

C 297. *Madrepora labrosa*, Dana.

Fig. Dana's Zooph. p. 486. pl. 43. fig. 3, and pl. 31. fig. 10 *a, b.*

Hab. Pacific Ocean.

Portion of a specimen growing in the form of a thick plate, and without any arborescent character. This species is remarkable for its very thick-lipped calicles and the great breadth of the plate.

Purchased.

C 298. *Madrepora alces*, Dana.

Fig. Dana's Zooph. p. 437.

Hab. East Indies.

A massive specimen formed by the partial union of numerous ligulate folia.

Presented by Edward Stanley, Esq., F.R.S.

C 299. *Madrepora robusta*, Dana.

Fig. Dana's Zooph. p. 475. pl. 39. fig. 3.

Hab. Feejee Islands.

This species is remarkable for its stout arborescent form, bearing small and very unequal calicles.

Purchased.

C 300. A portion of another specimen of *Madrepora robusta*, having the terminal branches united laterally so as to produce a solid mass.

Purchased.

C 301. *Madrepora robusta*. Fragment of a branch, with part of a branchlet accidentally united to it.

Presented by John Quekett.

C 302. *Madrepora nobilis*, Dana.

Fig. Dana's Zooph. p. 481. pl. 40. figs. 3 & 3a.

Hab. East Indies.

Six specimens of this species; most of them fragments, but showing to advantage the shrub-like form of branching. The calicles are much crowded over the upper surface of the branches.

Purchased.

C 303. *Madrepora gravis*, Dana.

Fig. Dana's Zooph. p. 470.

Hab. Unknown.

Two branches of this species, which probably grows to a large size; it is remarkable for the stoutness of its general form, and the number of incipient branchlets covering its upper surface.

Purchased.

- C 304. Extremity of a branch of *Madrepora gravida*. The branchlets and calicles are in good preservation, and the lace-like structure characteristic of the genus may be well seen here under a lens.

Presented by John Quekett.

- C 305. *Madrepora cervicornis*, Lam.

Fig. Dana's Zooph. p. 479.

Hab. West Indies.

Four specimens of this species, which is abundant in the West Indies, where it reaches a height of six feet and upwards. The calicles are large, somewhat scattered, and have the radiate structure generally distinct.

Hunterian.

- C 306. *Madrepora abrotanoides*, Lam.

Fig. Dana's Zooph. p. 477. pl. 41. figs. 1 & 1a.

Hab. Doubtful.

A fine clump of closely-branched stems, having their surface generally covered with thin tubular calicles; there is a bristling appearance produced by the irregular development of the cells.

Purchased.

- C 307. *Madrepora austera*, Dana.

Fig. Dana's Zooph. p. 478.

Hab. Unknown.

The extreme irregularity of the size and position of the calicles in this species is its most prominent character. The proliferous extremities of the branches are also remarkable.

Purchased.

- C 308. *Madrepora arbuscula*, Dana.

Fig. Dana's Zooph. p. 474. pl. 40. fig. 2.

Hab. East Indies. Sooloo Seas.

This species resembles some forms of *M. cervicornis* in its mode of growth, but is much more closely branched, and has crowded, nearly erect, tubular calicles. In this specimen there are some curious instances of coalescence of the branches arising from their accidental apposition or

irregular growth. In such cases the fleshy covering of the two branches unites, and a deposit of calcareous matter is made between them, which soon forms a solid connexion. *Purchased.*

C 309. *Madrepora secunda*, Dana.

Fig. Dana's Zooph. p. 481. pl. 40. figs. 4, 4 a, b.

Hab. East Indies.

A remarkable specimen, being entirely composed of broken branches, which have reunited in the most irregular manner, and with some of the branchlets reversed. This specimen was probably injured whilst alive by some heavy substance passing over it, and the fragments became united to the other parts of the coral on which they fell. *Hunterian.*

C 310. A similar specimen, but composed of lower and stouter parts of the coral.

Hunterian.

C 311. *Madrepora surculosa*, Dana.

Fig. Dana's Zooph. p. 445. pl. 32. figs. 4, 4 a & 5.

Hab. South Pacific and East Indies.

This species forms one of a series, in which the corallum consists of a number of branches radiating from a pedicellated centre. As the branches increase in size they coalesce laterally, forming a reticulate surface, from which spring numerous erect and sometimes proliferous branchlets, making together a broad even-topped clump. *Purchased.*

C 312. Fragment of a specimen of *Madrepora surculosa*.

Purchased.

C 313. Younger specimens of *Madrepora surculosa*.

Presented by John Quekett.

C 314. *Madrepora effusa*, Dana.

Fig. Dana's Zooph. p. 455.

Hab. East Indies.

A stout massive species with radiating branches, but without a pedicel. A great portion of the coral becomes solid from the abundant deposit of lime between the branches. *Presented by John Quekett.*

C 315. *Madrepora nasuta*, Dana.

Fig. Dana's Zooph. p. 453. pl. 34. figs. 2, 2 *a*, *b*.

Hab. South Pacific.

The subangular form of the branches in this specimen is probably owing to their crowded growth. *Purchased.*

C 316. *Madrepora globiceps*, Dana.

Fig. Dana's Zooph. p. 454. pl. 34. fig. 3.

Hab. South Pacific.

The branches in this species are stout and short, forming a compact convex clump. *Purchased.*

C 317. *Madrepora subulata*, Dana.

Fig. Dana's Zooph. p. 448. pl. 33. figs. 3, 3 *a*.

Hab. East Indies.

Marginal fragment of a specimen. *Presented by John Quekett.*

C 318. *Madrepora cytherea*, Dana.

Fig. Dana's Zooph. p. 441. pls. 3 *a*, 3 *b*.

Hab. South Pacific.

A young specimen, with an irregular growth, and united below to a fragment of *M. spicifera*. *Purchased.*

C 319. *Madrepora ramiculosa*, Dana.

Fig. Dana's Zooph. p. 463. pl. 35. fig. 4.

Hab. Pacific.

A broad clump of irregular branches arising from partial coalescence.

Presented by John Quekett.

C 320. *Madrepora tortuosa*, Dana.

Fig. Dana's Zooph. p. 467. pl. 37. fig. 3.

Hab. South Pacific.

This species is remarkable for the irregular position of the calicles, which open in every direction.

Presented by John Quekett.

C 321. *Madrepora spicifera*, Dana.

Fig. Dana's Zooph. p. 442. pl. 33. figs. 4, 4 *a*, *b*, & 5.

Hab. East Indies and Pacific.

This is a species subject to great variety in the development of its branchlets, which produces a corresponding variation in the appearance of the upper surface of the frond. *Presented by John Quekett.*

C 322. A young specimen of *Madrepora spicifera*, vasiform, and supported on a stout pedicel; the branchlets here are proliferous, and the terminal calicles of considerable length. *Presented by John Quekett.*

C 323. Two specimens of *Madrepora spicifera*, showing the reticulation by coalescence of the branches in the adult animal. The branchlets are here of the typical form. *Presented by John Quekett.*

C 324. This specimen agrees with the variety termed *abbreviata* by Dana, and is peculiar in having the branchlets extremely stunted.

Presented by Edward Stanley, Esq., F.R.S.

C 325. This magnificent specimen differs so much from the typical *M. spicifera* in the elegance of its branching and the length of the terminal calicles, that it might well receive a separate title; yet the variation is probably due to the situation and other favourable circumstances in which the young coral polype was at first placed.

In No. 322 there is an indication of the same mode of growth.

Presented by W. J. Broderip, Esq., F.R.S.

C 326. *Madrepora convexa*, Dana.

Fig. Dana's Zooph. p. 449.

Hab. East Indies.

A perfect specimen, attached to a small portion of *Mussa sinuosa*. The marginal branches are very proliferous, and differ in this respect from those arising from the centre of the frond. *Purchased.*

C 327. Another example of *M. convexa*, but entirely denuded of the calicles, from exposure to the washing of the sea after the death of the polypes.

Presented by John Quekett.

C 328. *Madrepora carduus*, Dana.

Fig. Dana's Zooph. p. 464. pl. 36. figs. 2, 2 a.

Hab. South Pacific.

The regular arrangement of the calicles and the number of the delicate branchlets are striking characters in this species, and give it a remarkable and elegant appearance.

Presented by Capt. Sir E. Home, Bart., R.N.

C 329. Branches of *M. carduus*.

Presented by Capt. Sir E. Home, Bart., R.N.

C 330. *Madrepora echinata*, Dana.

Fig. Dana's Zooph. p. 464. pl. 36. figs. 1, 1 a.

Hab. South Pacific.

The branchlets in this species are often terminated by an acute thorn-like point instead of the usually prominent polype-cell ; when, however, the terminal calicle is present, it is always of small size.

Presented by John Quekett.

Tribe II. CARYOPHYLLACEA.

Mostly gemmiparous ; gemmation inferior, the polypes not widening at summit.
Cells many-rayed.

Genus GEMMIPORA, Blainv.

Foliaceous or glomerate, often cup-shaped ; coralla porous, with a granulous surface and cylindrical or conico-cylindrical calicles.

C 331. *Gemmipora peltata*, Esper.

Fig. Dana's Zooph. p. 410.

Hab. East Indies.

Hunterian.

C 332. *Gemmipora cinerascens*, Ellis.

Fig. Dana's Zooph. p. 411. pl. 30. fig. 11.

Hab. East Indies.

A fine cup-shaped specimen, growing from a central pedicel.

Purchased.

C 333. *Gemmipora frondens*, Dana.

Fig. Dana's Zooph. p. 412. pl. 30. fig. 10 *a, b, c.*

Hab. South Pacific.

This specimen is only a fragment of one of the folia, which form the usual mode of growth in this species.

Presented by John Quekett.

Genus ANTHOPHYLLUM, Schweigger.

Aggregato-gemmate, glomerate; coralla consisting of calicular tubes, and a separable spongy calcareous base. Calicles prominent, with very solid sides, often faintly striate; lamellæ entire, generally exsert.

C 334. *Anthophyllum fasciculatum*, Linn.

Fig. Dana's Zooph. p. 399.

Hab. East Indies.

The various modes of growth and the manner in which the polype-tubes are imbedded and supported in a calcareous spongy mass are well shown in this series of specimens. In No. 334 a small group of tubes may be seen, placed on the top of the large mass; this must be explained, not by their budding from the larger series, but as arising from one of the ova, probably thrown out by the older polypes; this has been deposited among the parent tubes, and developed in the usual manner.

Presented by John Quekett.

C 335. A washed specimen of the above species.

Presented by John Quekett.

C 336. *Anthophyllum cespitosum*, Esper.

Fig. Dana's Zooph. p. 401. pl. 28. fig. 4.

Hab. East Indies.

The irregular lobate growth of the coral-mass, and the thin paper-like texture of the calicles, are the principal characters of this species.

Presented by Capt. Sir E. Home, Bart., R.N.

C 337. A second specimen, with great variation in the size of the calicles.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *OCULINA*, Lam.

Aggregato-gemmate, one bud proceeding from each polype, the succession forming elongating stems, divaricately ramose. Coralla solid, with the exterior smooth; calicles subcylindrical; lamellæ entire, more or less exsert.

C 338. *Oculina diffusa*, Lam.

Fig. Dana's Zooph. p. 397.

Hab. West Indies.

A small species, much branched.

Presented by John Quekett.

C 339. *Oculina pallens*, Ehr.

Fig. Dana's Zooph. p. 395. fig. 29. p. 67.

Hab. West Indies.

Portions of a large specimen. The peculiar radiated exterior of the calicles is characteristic of the species. These specimens also show the dense texture of the corallum in this genus.

Presented by John Quekett.

C 340. *Oculina virginea*, Linn.

Fig. Dana's Zooph. p. 396.

Hab. Mediterranean Sea.

The regular alternation of the calicles produces a zigzag form in the growth of this species.

Presented by Capt. Sir E. Home, Bart., R.N.

C 341. *Oculina oculata*, Pallas.

Fig. Dana's Zooph. p. 395.

Hab. West Indies.

This species is remarkable for the intricate manner in which the branches coalesce.

Hunterian.

C 342. *Oculina varicosa*, Lesueur.

Fig. Dana's Zooph. p. 394. fig. 28. p. 67.

Hab. West Indies.

A large mass of loosely branched coral, united at various parts by apposition of the branches.

Presented by Capt. Sir E. Home, Bart., R.N.

C 343. *Oculina prolifera*, Pallas.*Fig.* Dana's Zooph. p. 393.*Hab.* North coast of Britain and Norway.

A fine species, with large turbinated calicles. One of the few British corals.

Presented by John Quekett.

GENUS DENDROPHYLLIA, Blainville.

Aggregato-gemmate, arborescent; coralla subcellular; calicles cylindrical, lamellæ included, unequal; cell deep, broad at bottom; exterior smooth, or finely striate.

C 344. *Dendrophyllia ramea*, Linn.*Fig.* Dana's Zooph. p. 386.*Hab.* Mediterranean and adjoining Atlantic coasts.

This common branched coral grows to a large size. It may be easily known by its large distant calicles and undulato-striate surface.

*Purchased.*C 345. Part of a massive specimen of *Dendrophyllia ramea*, consisting principally of the main branches.*Purchased.*C 346. Fragment of a branch of *Dendrophyllia ramea*. *Presented by John Quekett.*C 347. *Dendrophyllia diaphana*, Dana.*Fig.* Dana's Zooph. p. 389. pl. 30. fig. 3.*Hab.* East Indies.

A delicate species, with very thin paper-like calicles.

Presented by John Quekett.

GENUS CYATHINA, Ehr.

Simple, attached, terminate; coralla, with the lamellæ, nearly or quite entire; cells coronate within.

C 348. *Cyathina Smithii*, Dana.*Fig.* Dana's Zooph. p. 372.*Hab.* British Islands.

This coral is abundant on many parts of our coast, particularly in

Devonshire and Cornwall. When the animal is fully expanded, it projects as much as an inch above the corallum, the upper part of which is then completely hidden. The specimen is of an average size.

Presented by T. H. Stewart, Esq.

C 349. *Cyathina turbinata*?, Dana.

Fig. Dana's Zooph. p. 372.

This specimen has a general resemblance to *C. turbinata*, which may prove to be the young state of *C. cyathus*. *Presented by John Quekett.*

Genus STEPHANOPHYLLIA, Mich.

Non-budding, free, and disciform; below, nearly flat; coralla above radiated with prominent lamellæ.

C 350. *Stephanophyllia* — ?

This genus is remarkable for the flattened form of the corallum, as well as for the branched appearance of the lamellæ, caused by the union of the members of each group. The base of the coral is composed of a series of concentric circles, crossed by the external ribs which radiate from the centre.

Hunterian.

Genus HETEROCYATHUS, M.-Edw.

C 350A. *Heterocyathus* — ?

Hab. Australia.

Presented by John Quekett.

Tribe III. ASTREACEA.

Family I. *Fungidæ*.

Coralla without true cells, surface lamello-striate, and usually stellately so, stars not circumscribed; in aggregate coralla, the lamellæ extending uninterruptedly from centre to centre.

Genus MYCEDIA, Dana.

Surface with transverse or reticulate ridges; fossæ sometimes long and even, but usually consisting of separate excavate cells, clustered or seriate.

C 351. *Mycedia cristata*, Lam.*Fig.* Dana's Zooph. p. 343.*Hab.* West Indies.

The reticulate ridges are strongly marked in this species.

*Presented by John Quekett.*C 352. *Mycedia cucullata*, Ellis.*Fig.* Dana's Zooph. p. 339.*Hab.* West Indies.

Young specimens. The cells are confined to the upper surface of the frond, which is supported by a broad attachment below.

Presented by John Quekett.

Genus AGARICIA.

Attached Fungidæ, oblique or erect explanate, unifacial or bifacial; polypes transversely seriate, with the outer side prominent; sometimes subseriate, with the parts around each mouth elevated; hence the mouths are arranged either at the bottom of transverse fossæ or of cells. Coralla transversely or reticulately colliculate; lamellæ minute, subentire, crowded, alternately smaller.

C 353. A specimen apparently allied to *Agaricia*, but having a more massive growth than is usual in that genus.*Presented by John Quekett.*

Genus PAVONIA, Lam.

Explanate, glomerate or subramose; coralla having the surface plain or stellate, and not plicate; oririmes distinct, but cells none; lamellæ nearly or quite entire.

C 354. *Pavonia boletiformis*, Lam.*Fig.* Dana's Zooph. p. 327.*Hab.* East Indies.The folia in this species are irregularly united, forming deep chambers between them; the cells are disposed in transverse rows. *Hunterian.*

C 354A. *Pavonia explanulata*, Lam.*Fig.* Dana's Zooph. p. 322.*Hab.* East Indies.

A magnificent specimen.

*Presented by W. F. Pollock, Esq.*C 354B. A smaller specimen of *Pavonia explanulata*, Lam.*Presented by John Quekett.*

C 355. Three specimens of the same species, showing some little variation in the shape of the frond.

*Presented by John Quekett.*C 356. *Pavonia papyracea*, Dana.*Fig.* Dana's Zooph. p. 323. pl. 22. fig. 3.*Hab.* Sooloo Seas.

A small species composed of a few minute, deeply incised folia.

Presented by John Quekett.

Genus PSAMMOCORA, Dana.

Attached, glomerate or ramose ; polypes not seriate ; interstices sometimes flat, usually throughout turgidly elevated, the surface then consisting of excavate cells ; coralla porous ; lamellæ very minute, and often indistinct.

C 357. *Psammocora plicata*, Dana.*Fig.* Dana's Zooph. p. 346. pl. 25. fig. 2.*Hab.* South Pacific.

The branches in this species are much twisted, and frequently coalescing. The cells are extremely minute, and arranged in irregular vertical rows.

Presented by John Quekett.

C 358. A fragment of a specimen of the same species.

Presented by John Quekett.

Genus POLYPHYLLIA, Quoy and Gaimard.

Free Fungidæ, budding and explanate ; polypes equal, and throughout scattered,

rarely remotely seriate along the medial line ; coralla with very short lamellæ, denticulate, scattered, or imperfectly radiate.

C 359. *Polyphyllia pileiformis*, Dana.

Fig. Dana's Zooph. p. 317. pl. 21. fig. 4.

Hab. Feejee Islands.

There is hardly any trace of a seriate arrangement of the cells in this species. *Purchased.*

C 360. *Polyphyllia talpa*, Blainv.

Fig. Dana's Zooph. p. 313. pl. 21. figs. 5 & 5 a, b, c, d.

Hab. East Indies.

The central line of cells in this well-known species shows an approach to the character of the genus next to be mentioned.

Presented by John Quekett.

Genus HERPETOLITHUS, Eschscholtz.

Free Fungidæ, budding and explanate ; a single medial series of large polypes, and others scattered ; coralla elongate ; lamellæ interrupted at the scattered oririmes, scarcely at all radiate, denticulate, under surface echinate.

C 361. *Herpetolithus limacinus*, Lam.

Fig. Dana's Zooph. p. 307. pl. 20. fig. 2.

Hab. East Indies.

The extremity of this specimen is a little distorted, and the lamellæ of the medial series are unusually developed. *Presented by John Quekett.*

C 362. *Herpetolithus interruptus*, Ehr.

Fig. Dana's Zooph. p. 308.

Hab. Unknown.

This is a curiously deformed specimen, having part of the margin folded on itself. *Presented by John Quekett.*

C 363. *Herpetolithus crassus*, Dana.

Fig. Dana's Zooph. p. 310. pl. 20. fig. 5 a, b, c.

Hab. Feejee Islands.

A very fine specimen, showing the manner in which the young become

attached. The ova are frequently washed under the parent coral, which naturally has the concave side downwards; the young polypes thus have a sheltered place for attachment, but become separated when they reach a certain size. *Purchased.*

C 364. *Herpetolithus crassus*, Dana.

This is also a good specimen, showing the characters of the species.

Presented by John Quekett.

C 365. *Herpetolithus crassus*, Dana.

A small and washed specimen.

Hunterian.

C 366. A young specimen of *Herpetolithus crassus*, Dana.

Presented by John Quekett.

Genus FUNGIA, Lam.

Free, not budding, hence quite simple, orbicular or elliptic, sometimes conical; coralla with the upper surface, and to some extent the under surface, lamello-radiate, the latter tuberculate.

C 367. *Fungia Ehrenbergii*, Leuckart.

Fig. Dana's Zooph. p. 303. pl. 19. fig. 1.

Hab. East Indies.

A large specimen: the transverse fracture exhibits the structure and connexion of the lamellæ.

Presented by John Quekett.

C 368. *Fungia Ehrenbergii*, Leuckart.

The polypes of the genus *Fungia* are quite simple, the medial line in the coral representing the situation of the mouth.

Presented by John Quekett.

C 369. Another specimen of the same species, very similar to the preceding.

Presented by John Quekett.

- C 370. A specimen of *Fungia Ehrenbergii*, Leuckart, bisected longitudinally, and showing the transverse dissepiments and arrangement of the radiating plates. This species connects the following circular Fungidæ with the compound elliptical forms already noticed under the genera *Herpetolithus* and *Polyphyllia*. *Purchased.*

- C 371. *Fungia agariciformis*, Lam.

Fig. Dana's Zooph. p. 292. pl. 18. fig. 5.

Hab. East Indies.

This specimen is a little distorted.

Presented by John Quekett.

- C 372. *Fungia agariciformis*, Lam.

A young specimen.

Presented by John Quekett.

- C 373. A larger specimen of the same species as the two preceding.

Presented by John Quekett.

- C 374. *Fungia dentata*, Dana.

Fig. Dana's Zooph. p. 293. pl. 18. fig. 7.

Hab. East Indies.

The under surface of this species is crowdedly echinate. A young specimen is here attached.

Presented by John Quekett.

- C 375. A specimen of *Fungia dentata*, Dana.

Presented by John Quekett.

- C 376. *Fungia dentata*, Dana. A cup-shaped variety.

Presented by John Quekett.

- C 377. *Fungia echinata*, Esper.

Fig. Dana's Zooph. p. 294. pl. 18. figs. 8, 9 & 9 a, b.

Hab. East Indies.

This species grows to a large size, and has the lamellæ strongly incised.

Presented by John Quekett.

- C 378. *Fungia echinata* (Esper), Dana. A young specimen.

Presented by John Quekett.

C 379. *Fungia repanda*, Dana.

Fig. Dana's Zooph. p. 29. pl. 19. figs. 1, 1 a, 2 & 2 a.

Hab. East Indies and Feejee Islands.

This is one of the largest and commonest species of the genus.

Presented by John Quekett.

C 380. *Fungia repanda*, Dana.

A good specimen, of very irregular growth.

Presented by John Quekett.

C 381. *Fungia actiniformis*, Quoy and Gaimard.

Fig. Dana's Zooph. p. 299.

Hab. Island of Cocos.

The lamellæ in this species are remarkable for the large size of their dentations, and are unlike most of the other Fungidæ in this respect. The tentacles of the polype are also described as peculiar, from their length.

Presented by John Quekett.

C 382. *Fungia dentigera*, Leuckart.

Fig. Dana's Zooph. p. 301. pl. 18. fig. 4.

Hab. Red Sea and Pacific.

Three specimens of different sizes. These corals are very solid and compact, and have the lamellæ flexuous and unequal.

Presented by John Quekett.

C 383. *Fungia tenuis*, Dana.

Fig. Dana's Zooph. p. 290. pl. 18. fig. 1.

Hab. Pacific Ocean.

Two specimens of this thin and delicate species.

Presented by John Quekett.

Genus ECHINOPORA, Lam.

Explanate or ramose; polypes a little prominent, placed perpendicularly on the surface of the zoophyte; coralla striate and echinulate, nearly solid; calicles convex, echinulate.

- C 384. *Echinopora reflexa*, Dana. This species is unifacial, and grows in spreading folia.

Fig. Dana's Zooph. p. 280. pl. 17. figs. 2 & 2 a, b.

Hab. South Pacific.

Presented by John Quekett.

- C 385. Two branched spiny fragments of *Echinopora horrida*, Dana.

Fig. Dana's Zooph. p. 282. pl. 17. figs. 4 & 4 a, b, c.

Hab. South Pacific.

Presented by John Quekett.

Genus MERULINA, Ehrenberg.

Thin, explanate or ramose; polypes very small; disks usually budding seriately (as in the *Meandrinæ*); the disks and ridges therefore linear, venosely furcate or reticulate. Coralla nearly solid; lamellæ quite small, oblique.

- C 386. *Merulina ampliata*, Lam.

Fig. Dana's Zooph. p. 272. pl. 15. figs. 2 & 2 a.

Hab. East Indies.

Part of one of the folia, with some irregular branching projections from the surface. These lateral prolongations must not be regarded as the regular form of increase in the species, but rather as an excessive development of some of the polype-cells.

Presented by John Quekett.

- C 387. An irregular fragment of *Merulina ampliata*, Lam., in which the surface is studded with the remains of a species of Barnacle which is habitually parasitical on corals.

Presented by John Quekett.

- C 388. A series of specimens of *Merulina ampliata*, Lam.

Presented by John Quekett.

- C 389. The *Merulina ampliata*, Lam. The regular increase by thin folia is shown in this specimen.

Purchased.

- C 390. A fragment of one of the folia of *Merulina regalis*, Dana.

Fig. Dana's Zooph. p. 273. pl. 15. figs. 1 & 1 a, b, c, d, e.

Hab. South Pacific.

Presented by John Quekett.

C 391. The *Merulina rigida*, Dana.

Fig. Dana's Zooph. p. 276. pl. 17. figs. 1 & 1a, b, c.

Hab. South Pacific.

This coral grows in a branching form, and never assumes the foliated appearance of the preceding species. *Presented by John Quekett.*

Genus MONTICULARIA, Lam.

Aggregate *Astræidæ*; disks seriatly and reticulately budding; no interstices between the polypes, but small cones, around which the tentacles are arranged. Coralla cellular; surface covered with small lamello-radiate cones.

C 392. The *Monticularia lobata*, Lam.

Fig. Dana's Zooph. p. 268.

Hab. East Indies.

Presented by John Quekett.

Genus MEANDRINA, Lam.

Aggregate *Astræidæ*; disks seriatly budding and linear, sinuous; tentacles forming a series along either margin of the linear disk. Coralla with trench-like gyrose cells; lamellæ thin, prolonged out of the cell to the middle of the septum, or beyond.

C 393. The *Meandrina cylindrus*, Ehr.

Fig. Dana's Zooph. p. 265.

Hab. Unknown.

Presented by John Quekett.

C 394. Eight small specimens of the Brainstone Coral, *Meandrina cerebriformis*, Lam., showing the general characters of the species.

Fig. Dana's Zooph. p. 263. pl. 14. fig. 2.

Hab. West Indies.

Presented by John Quekett, and purchased.

C 395. A fine hemispherical mass of *Meandrina cerebriformis*. Some of these domes are said to attain a diameter of 20 feet. They are only alive for about an inch below the surface.

Presented by W. J. Broderip, Esq., F.R.S.

- C 396. The *Meandrina gracilis*, Dana.
Fig. Dana's Zooph. p. 261. pl. 14. figs. 6 & 6*a*, *b*.
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*
- C 397. The *Meandrina interrupta*, Dana.
Fig. Dana's Zooph. p. 258. pl. 14. fig. 18.
Hab. West Indies. *Purchased.*
- C 398. Five small specimens of the *Meandrina labyrinthica*, Ellis, most of them water-worn.
Fig. Dana's Zooph. p. 256. pl. 14. fig. 1.
Hab. West Indies and Red Sea.
Hunterian, and presented by John Quekett.
- C 399. Three rounded fragments of *Meandrina labyrinthica* ?. *Purchased.*
- C 400. A small fragment of the *Meandrina phrygia*, Lam.
Fig. Dana's Zooph. p. 260. pl. 14. figs. 8 & 8*a*, *b*.
Hab. East Indies. *Purchased.*
- C 401. The *Meandrina strigosa*, Dana.
Fig. Dana's Zooph. p. 257. pl. 14. fig. 4*a*, *b*.
Hab. West Indies ?. *Presented by John Quekett.*
- C 402. Two specimens of *Meandrina dedalea*, Ellis.
Fig. Dana's Zooph. p. 254. pl. 14. fig. 12 *a*, *b*, *c*.
Hab. East Indies. *Presented by John Quekett.*

Genus ASTRÆA, Lam.

Aggregate *Astræidæ*; disks simple, rarely compound; coralla convex, usually hemispherical; cells excavate, nearly circular, sometimes angular or lobed; lamellæ extending between the cells, and usually interrupted at the middle of the septum.

- C 403. The *Astræa dipsacea*, Lam.
Fig. Dana's Zooph. p. 225. pl. 11. fig. 4*a*, *b*, *c*, *d*.
Hab. West Indies. *Presented by John Quekett.*

- C 404. Young specimens of *Astræa dipsacea*, Lam.
Hunterian, and presented by John Quekett.
- C 405. The *Astræa pentagona*, Esper.
Fig. Dana's Zooph. p. 241.
Hab. East Indies. *Presented by John Quekett.*
- C 406. Two specimens of *Astræa robusta*, Dana.
Fig. Dana's Zooph. p. 248. pl. 13. figs. 10 & 10*a, b, c, d.*
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*
- C 407. The *Astræa fusco-viridis*?, Quoy and Gaimard.
Fig. Dana's Zooph. p. 228. pl. 11. figs. 7 & 7*a, b, c, d.*
Hab. Pacific Islands. *Presented by John Quekett.*
- C 408. The *Astræa parvistella*, Dana.
Fig. Dana's Zooph. p. 244. pl. 13. figs. 6 & 6*a, b, c.*
Hab. Feejee Islands. *Presented by John Quekett.*
- C 409. The *Astræa denticulata*, Ellis.
Fig. Dana's Zooph. p. 234. pl. 12. figs. 6 & 6*a, b, c.*
Hab. East Indies and Pacific. *Purchased.*
- C 410. The *Astræa denticulata*, Ellis.
Hab. East Indies and Pacific. *Presented by John Quekett.*
- C 411. The *Astræa microphthalma*, Lam.
Fig. Dana's Zooph. p. 217. pl. 10. fig. 11.
Hab. South Pacific. *Presented by T. H. Stewart, Esq.*
- C 412. The *Astræa radiata*, Ellis (labelled *Mad. radiata*).
Fig. Dana's Zooph. p. 207.
Hab. West Indies. *Hunterian.*
- C 413, 414. Several specimens belonging to the genus *Astræa*, but all more or less defaced and water-worn. *Hunterian.*
- C 415. An extremely light cellular coral, belonging to the family *Astræidæ*, but whose exact relations are doubtful. *Purchased.*

Genus TRIDACOPHYLLIA, Blainville.

Aggregate *Astræidæ*; animals quite broad, with the sides expanded, explanate, and elevated. Coralla substipitate; septa thin, foliaceous, enclosing broad cells.

C 416. Two specimens of *Tridacophyllia lactuca*, Blainville.

Fig. Dana's Zooph. p. 195. pl. 9. fig. 10.

Hab. East Indies.

Presented by John Quekett.

Genus MANICINA, Ehrenberg.

Animals aggregate or segregate; disks commonly seriatly budding, long and sinuous. Coralla substipitate, convex; cells meandering, with the margin rounded; lamellæ even, thin, neatly and distinctly denticulate.

C 417. Five specimens of the *Manicina areolata*, Ellis, showing different stages of growth.

Fig. Dana's Zooph. p. 191. pl. 9. fig. 3.

Hab. West Indies.

Hunterian and purchased.

C 418. The *Manicina amarantum*, Dana.

Fig. Dana's Zooph. p. 189. pl. 9. fig. 1.

Hab. East Indies.

Presented by John Quekett.

C 419. The *Manicina meandrites*, Ehrenberg.

Fig. Dana's Zooph. p. 193.

Hab. West Indies.

Presented by John Quekett.

Genus MUSSA, Oken.

Large *Astræidæ*, segregate, also explanato-glomerate; calicles very stout, subturbinate, with lobed cells, sometimes meandering; lamellæ coarsely dentate.

C 420. The *Mussa crista*, Lam.

Fig. Dana's Zooph. p. 183. pl. 8. fig. 6.

Hab. Indian Ocean.

Presented by John Quekett.

- C 421. The *Mussa sinuosa*, Lam.
Fig. Dana's Zooph. p. 179. pl. 8. fig. 1 *a, b, c.*
Hab. East Indies. Red Sea. *Presented by John Quekett.*
- C 422. A vertical section of the *Mussa fragilis*, Dana.
Fig. Dana's Zooph. p. 185. pl. 8. fig. 7.
Hab. West Indies. *Presented by John Quekett.*
- C 423. A vertical section of the *Mussa recta*, Dana.
Fig. Dana's Zooph. p. 186. pl. 8. fig. 11.
Hab. Pacific Ocean. *Presented by John Quekett.*
- C 424. The *Mussa costata*, Dana.
Fig. Dana's Zooph. p. 176. pl. 7. figs. 2 & 2 *a, b.*
Hab. Tahiti. *Presented by John Quekett.*
- C 425. A fragment of the *Mussa angulosa*, Oken.
Fig. Dana's Zooph. p. 176. pl. 8. fig. 4.
Hab. West Indies. *Hunterian.*
- C 426. The *Mussa cytherea*, Dana.
Fig. Dana's Zooph. p. 180. pl. 7. fig. 3 *a, b, c.*
Hab. Society Islands. *Presented by John Quekett.*

Genus CTENOPHYLLIA, Dana.

Animals explanato-glomerate ; disk seriatly budding ; lamellæ very stout, few, entire, or nearly so.

- C 427. The *Ctenophyllia pachyphyllia*, Ehrenberg.
Fig. Dana's Zooph. p. 172. pl. 14. fig. 15.
Hab. Unrecorded. *Hunterian.*
- C 428. A specimen of *Ctenophyllia pachyphyllia*, Ehrenberg. *Hunterian.*

Genus EUPHYLLIA, Dana.

Quite simple, or segregato-gemmate, rarely free ; calicles subturbinate, circular or much compressed, sometimes meandering ; lamellæ nearly or quite entire.

C 429. The *Euphyllia rugosa*, Dana.*Fig.* Dana's Zooph. p. 166. pl. 6. figs. 3 & 3 *a*, *b*, *c*, *d*, *e*.*Hab.* Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*C 430. The *Euphyllia turgida*, Dana.*Fig.* Dana's Zooph. p. 166. pl. 9. figs. 9 *a*, *b*.*Hab.* East Indies ?. *Presented by Capt. Sir E. Home, Bart., R.N.*C 431. The *Euphyllia sinuosa*, Dana.*Fig.* Dana's Zooph. p. 168.*Hab.* East Indies ?. *Presented by John Quekett.*C 432. A vertical section of *Euphyllia meandrina*, Dana, showing the lamellæ.*Fig.* Dana's Zooph. p. 167. pl. 6. figs. 4 & 4 *a*, *b*.*Hab.* East Indies. *Presented by John Quekett.**Appendix of additional species, or those of uncertain position.*C 433. The *Dendrophyllia coccinea*, Ehrenberg.*Fig.* Dana's Zooph. p. 388. pl. 30. fig. 4.*Hab.* Red Sea. East Indies.*Presented by G. E. Blenkins, Esq., F.R.C.S.E.*C 434. The *Seriatopora caliendrum*, Ehrenberg.*Fig.* Dana's Zooph. p. 522.*Hab.* Red Sea. *Presented by Capt. Sir E. Home, Bart., R.N.**Seriatopora* is closely allied to *Pocillopora*, and mainly differs from it in having the cells in linear series.C 435. The *Allopora rosea*, Pall.*Fig.* Dana's Zooph. p. 695.*Hab.* West Indies.*Presented by Capt. Sir E. Home, Bart., R.N., and purchased.*

The structure of the cells differs from those of the true corals. The animals are unknown.

C 436. The *Allopora flabelliformis*, Lam.

Fig. Dana's Zooph. p. 694.

Hab. East Indies.

Presented by John Quekett.

Genus MILLEPORA.

The genus *Millepora* differs from true corals in the character of its cells, and the animals are said to resemble the Hydroid Polypes; their exact position in the animal series therefore is doubtful.

C 437. The *Millepora alcicornis*, Pallas.

Fig. Dana's Zooph. p. 543.

Hab. West Indies.

Presented by J. E. Gray, Esq., F.R.S. &c.

C 438. Another variety of *Millepora alcicornis*, Pallas, encrusting the tubes of a *Serpula*?.
Hunterian.

C 439, 440. Several fragments of *Millepora alcicornis*.
Hunterian.

C 441. The *Millepora tortuosa*, Dana.

Fig. Dana's Zooph. p. 544.

Hab. South Pacific.

Purchased.

C 442. A massive specimen of *Millepora*.

Presented by J. E. Gray, Esq., F.R.S. &c.

C 443, 444. Several specimens of *Millepora truncata*, Ellis.
Hunterian.

C 445. A fragment of a small branching *Millepora*.
Hunterian.

C A T A L O G U E.

R E C E N T I N V E R T E B R A T A.

Class IV. ECHINODERMATA—ECHINODERMS.

THE animals composing this Class have, as an external skeleton, either a leathery skin, more or less strengthened by calcareous particles distinct from each other, or a system of calcareous plates articulated together, so as to form a rounded case or shell, which in most instances is provided with warty immoveable projections, upon which sharp-pointed, more or less symmetrical and sculptured spines are articulated; these are capable of limited motion, and thus, combined with certain tubular organs termed cirrhi, become instruments of progression.

According to Professor Edward Forbes, the latest authority on the British Echinoderms, they are best classified by the variety and form of their locomotive organs, consisting of the cirrhi and spines; and he divides them accordingly into six orders, viz. *Pinnigrada*, *Spinigrada*, *Cirrhigrada*, *Cirrhi-Spinigrada*, *Cirrhi-Vermigrada*, and *Vermigrada*; but by more modern investigation it has been shown that the last order should be referred to the Annulata.

The several orders of Echinoderms vary considerably in their external appearance; and although all belong to Cuvier's *Radiate* division of the Animal Kingdom, they may be traced, by means of fossil and recent species, from the Zoophytic to the Annuloid form of invertebrate life.

Order I. PINNIGRADA, Forbes. HYPOSTOMATA, Gray.

Family *Pentacrinidæ*.

Genus PENTACRINUS, Miller.

This genus is the living representative of the Crinoideæ, a group of pedunculated or stalked Echinoderms, which, under various forms, abounded in the seas of the Palæozoic and Secondary Ages, their remains having largely contributed to the formation of many limestones. In this genus the joints or ossicles of the column are generally angular, the articulating surfaces being sculptured with petaloid or radiating striæ.

- D 1. A fine specimen of *Pentacrinus caput-medusæ*. The skeleton consists of a jointed column, nineteen inches in length, supporting the body or calyx, and five bifurcating and pinnated rays. The column is composed of numerous pentagonal ossicles or joints, more or less uniform, and articulated to each other by pentapetalous striated surfaces, each ossicle having a central perforation. In the living state, the column is attached by its base to a rock or other submarine body. The filaments of the stem consist of numerous rounded particles terminated by a sharp-pointed, prehensile claw; these, in groups of five, arise at more or less regular distances around the column from the interangular groove. The number of the ossicles of the stem between each group of filaments gradually diminish as they approach the calyx; there are twenty-one groups of these filaments. The column supports the calyx, which consists of enlarged plates articulated together, and from the upper series of which the five bifurcating rays are continued; these rays are pinnate, and taper to their extremities.

Fig. Parkinson, Organic Remains, vol. ii. p. 270.

Hab. Barbadoes.

This remarkable Echinoderm, of which only a few specimens have yet been discovered, was purchased by Mr. Hunter in 1786 for the sum of fifteen guineas, at the sale of the museum of the late Duchess of Port-

land ; it is alluded to in Parkinson's 'Organic Remains,' where it is stated that "another specimen belonging to Dr. William Hunter is now in the University of Glasgow." *Hunterian.*

Genus COMATULA, Lam.

Body with five bifurcated pinnated arms ; free when adult, with simple filiform, jointed, clawed processes attached to the sides of its dorsal disc. When young, fixed on a long simple, jointed, pentangular stalk.

D 2. An adult specimen of the "Rosy Feather-Star," *Comatula rosacea*, Link, showing the dorsal surface.

Fig. Forbes, Brit. Starfishes, p. 5.

Hab. Plymouth Sound, in twenty fathoms, crawling on *Eschara foliacea*.

Presented by T. H. Stewart, Esq.

D 3. Specimens of the adult *Comatula rosacea*, retaining their position as found when alive, crawling on the stone.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

D 4. An imperfect specimen of *Comatula rosacea*, Link. In this specimen the jointed clawed arms of the convex antambulacral surface of the calyx have been removed ; the concave hexagonal impressions for these are seen, as also the two joints of the arms before bifurcating ; some of the dried perisoma is still left on the pinnæ.

Hab. British coast.

Hunterian.

D 5. Several specimens of *Comatula rosacea*.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

D 6. Two specimens of *Comatula rosacea*, in the young or stalked condition ; when first found in this state they were described by Mr. J. V. Thompson as a distinct animal, under the name of *Pentacrinus Europæus*. The stalks are attached to a portion of the frond of a *Laminaria digitata*.

Fig. Edin. New Phil. Journ. 1836.

Hab. Shetland.

Presented by Professor Kölliker.

- D 7. The *Comatula rosacea*, in its stalked state and at various ages, on the cœnecium of *Salicornaria farciminoides*.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

Order II. SPINIGRADA, Forbes.

Family I. *Ophiuridæ*.

Genus OPHIURA, Lam.

Rays prolonged into the disc superiorly, separated by large shield-shaped plates inferiorly ; rays squamous, tapering ; spines short and obscure after death. Cirrhi simple.

- D 8. Several specimens of the Common Sand-Star, *Ophiura texturata*, Lam. Some of the specimens exhibit reproduction of portions of the lost ray.

Fig. Forbes, Brit. Starfishes, p. 22.

Hab. Brighton.

Presented by John Quekett.

- D 9. A small specimen of *Ophiura texturata*, showing in a well-marked manner the reproduction of three of the lost rays, each having been broken off near the base.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- D 10. An *Ophiura texturata*, prepared to show the internal arrangement of the calcareous particles forming the calyx and ambulacral portion of the skeleton. The interradial space is filled up by flat scaly plates ; five of these, placed interambulacrally in the immediate neighbourhood of the mouth, are larger than the others, and are called “scutæ buccaliæ;” in front of these are the vertical plates that support the oral spines, which are here very small ; these plates are also fringed with still smaller spines. The interradial plates form a deep cup or hollow between the rays for the lodgement and protection of the viscera, which in this genus are never prolonged into the rays ; they also cover over the five vertebral ossicles, here plainly displayed, and seen to be of large size and protected above by the antambulacral plates of the rays ; the mouth is a star-shaped aperture.

Presented by T. H. Stewart, Esq.

D 11. An *Ophiura lacertosa*, Lam.

Fig. Encyclopédie Méthodique, pl. 122. fig. 4, pl. 123. fig. 1.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 12. A dissection illustrating the arrangement of the parts composing a ray in the *Ophiuræ*. The ray is seen to be made up of a series of segments, each segment being composed of a central or vertebral ossicle, two lateral plates bearing the spines, and an ambulacral or under, and an antambulacral or upper plate, each of which imbricates with its fellows.

Prepared by T. H. Stewart, Esq.

Genus OPHIOCOMA, Agassiz.

Rays not prolonged into the disc superiorly, separated at their origin beneath by small pentangular plates; rays squamous, simple; spines long, standing out from the rays after death. Cirrhi pinnate.

D 13. Two specimens of the Common Brittle-Star, *Ophiocoma rosula*, Link.

Fig. Forbes, Brit. Starfishes, p. 60.

Hab. Brighton.

Presented by John Quekett.

D 14. Two specimens of a larger variety of *Ophiocoma rosula*.

Hab. Tenby, South Wales.

Presented by T. H. Stewart, Esq.

- D 15. Three separated segments of a ray of *Ophiocoma rosula*. Each segment is composed of four separate portions: a central piece called the vertebral ossicle (*a*), a lateral plate on either side of the vertebral ossicle (*b*), bearing the spines (*b'*), an antambulacral plate (*c*), and ambulacral plate (*d*). The vertebral ossicles articulate with each other, and form a central chain of support to the other portions of the ray; the lateral plates have a convex external surface with a concave internal one. The antambulacral plate is a saddle-shaped piece, covering over and imbricating the upper surface of the ray; the ambulacral plates are quadrilateral, and also imbricated.

Presented by T. H. Stewart, Esq.

- D 16. Two specimens of *Ophiocoma granulata*, Link.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- D 17. An undescribed species of *Ophiocoma*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 18. An undescribed species of *Ophiocoma*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 19. An undescribed species of *Ophiocoma*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 20. The disarticulated splanchnic skeleton or calyx of an *Ophiocoma*. The *Ophiuridæ* have a complete oral skeleton, and in the *Ophiocoma* it is most perfect; they have a dental apparatus, however, peculiar to themselves, though in some respects it is a modification of the "lantern" of the *Echinidæ*. It is formed of ten alveolar pieces, arranged in sets of five interambulacrally, which are named by Müller "scutæ buccaliæ;" each alveolar half is united by symphysis to its fellow at their œsophageal border, and on this symphysis is placed a curious quadrangular vertical piece, named by Müller the "torus angularis;" the lower or oral half of this piece is slightly curved and transversely ridged, the remaining half has six perforations in pairs; these plates support the teeth, which are small, quadrangular, chisel-shaped pieces, having an opaque thickened base and semitransparent bevelled edge; these are called "palæ angulares." There is also preserved a calyx of another specimen of the same species, naturally articulated, and the ambulacral surface uppermost.

Prepared by T. H. Stewart, Esq.

- D 21. An undescribed species of *Ophiocoma*.

Hab. South Africa.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 22. An undescribed species of *Ophiocoma*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Euryales*.Genus *ASTROPHYTON*, Link.

Rays five, branching dichotomously from their roots, with cirrhous extremities.

D 23. The Shetland Argus, *Astrophyton scutatum*, Link.

Fig. Forbes, Brit. Starfishes, p. 67. Blainv. Man. d'Actin. p. 246.

Hab. Shetland.

Hunterian.

Order III. CIRRHIGRADA.

Family I. *Asteriadæ*.Genus *URASTER*, Agassiz.

Body five-rayed, rays spinous, excavated for viscera ; ambulacra bordered by three sets of spines. Cirrhi quadriserial.

D 24. The Spiny Crossfish, *Uraster glacialis*, Linn., Ag.

Fig. Forbes, Brit. Starfishes, p. 78.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

D 25. The *Uraster glacialis*, var. This specimen is a variety of *U. glacialis*, possessing seven rays instead of five, which is the normal number.

Fig. Forbes, Brit. Starfishes, p. 78.

Hab. British coast.

Presented by Capt. Sir E. Home, Bart., R.N.

D 26. The Common Crossfish, *Uraster rubens*, Linn.

Fig. Forbes, British Starfishes, p. 83.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

D 27. The Common Crossfish, *U. rubens*, Linn. This specimen illustrates the reproduction of a lost ray, which is a common occurrence in these animals.

Fig. Forbes, Brit. Starfishes, p. 83.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 28. A specimen of *Uraster rubens*, Linn., showing the rounded form of the arms when distended by the viscera.

Fig. Forbes, Brit. Starfishes, p. 83.

Hab. Frith of Forth.

Presented by John Quekett.

- D 29. A specimen of the *Uraster rubens*, in which two of the rays have been broken off at some period of the animal's life, and were being reproduced at the time of its death.

Fig. Forbes, Brit. Starfishes, p. 83.

Hab. British seas.

Presented by Sir Anthony Carlisle, F.R.S.

- D 30. A large specimen of *Uraster rubens*, which, by the removal of a portion of the antambulacral integument, the viscera, and soft parts of the animal, displays the arrangement of the particles forming the calcareous skeleton of the ambulacral portion, the internal aspect being uppermost. At the junction of the two halves of the vertebral ossicles in the rays, a deep groove is formed, in which the brachio-cirrhal vessel is situated. On either side of the vertebral ossicles there is a double row of cirrhal pores, arranged alternately. On the calycine ring, on either side of the first or basal vertebral ossicle, a large foramen is seen; on this the "Polian vesicle" is situated. The large "madreporiform" tubercle is also preserved, together with its long and tortuous sand-canal. The arrangement of the calyx may be well studied in this specimen. The two constituent portions of each basal vertebral ossicle, or those nearest the mouth, are moveably articulated with one another, and each is anchylosed with an interambulacral piece. Transverse muscles connect the two interambulacral pieces, which are also united by a single perpendicular plate, articulated along the oral edges, the free surface of which looks into the mouth and supports a number of oral spines, which are moveably articulated and acted on by special muscles, so as to serve in a manner the purpose of teeth, by guarding the oral aperture, and retaining the food while in process of being swallowed.

Hab. Plymouth Sound.

Prepared and presented by T. H. Stewart, Esq.

- D 31. The calycine ring of a specimen of *Uraster rubens*, showing the "palæ angulares," or oral spines, &c. ; for description of which see the preceding specimen, D 30.

Presented by T. H. Stewart, Esq.

- D 32. The calyx, or central portion of the body of *Uraster glacialis*, seen from without, and showing the arrangement of the oral spines, which consist of bundles of long, somewhat flattened conical spines, the two central ones of each bundle being longer than the others ; the two lateral ones on either side are very short, and thicker at their lower than at their upper half. The five bundles do not quite meet at their tips, therefore they only partially close the oral aperture.

Presented by T. H. Stewart, Esq.

- D 33. A young specimen of *Uraster rubens*, showing remarkably well the arrangement of the spines on the disk and rays.

Hab. Brighton.

Presented by John Quekett.

- D 34. A Starfish allied to the genus *Uraster*, especially to the British species *glacialis*, but possessing eleven rays, three of which are in a young state, having been broken off and again reproduced. The madreporic tubercle is very large, and situated close to the border of the disk ; cirrhi quadriserial.

Hab. Coral reef, Vavou, Friendly Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 35. A Starfish resembling the preceding, with the exception that the spines are smaller and less numerous.

Hab. Friendly Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 36. A large species of *Uraster* with six rays.

Fig. MS., College of Surgeons.

Hab. Southern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 37. The *Asterias lœvigata*, Lam.

Fig. Seba, Mus. vol. iii. tab. 6. figs. 13, 14

Hab. Cook's Strait, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 38. Three specimens of *Asterias lœvigata*, Lam., in a young state, of the above species.

Hab. Cape of Good Hope.

Presented by Dr. Verraux.

- D 39. A small specimen of *Asterias*, allied to *A. lœvigata*.

Hab. Wallis's Island.

Presented by Dr. Verraux.

- D 40. A Starfish allied to the *Asterias lœvigata*, Lam., but possessing only four rays, and these more rounded and tapering.

Hab. Wallis's Island.

Presented by Capt. Sir E. Home, Bart., R.N.

Family 2. *Solasteriæ*.

Genus CRIBELLA, Agassiz.

Ray rounded, reticulated, as also the disc ; reticulations spiniferous ; intermediate spaces porous ; ambulacra bordered by two sets of spines. Cirrhi biserial.

- D 41. A large specimen of the Eyed Cribella, *Cribella oculata*, Penn. When living the colour was of a bright vermillion above, and straw-coloured below ; by the action of light the colour has now faded.

Fig. Forbes, Brit. Starfishes, p. 100.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- D 42. Two specimens of an exotic species of *Cribella*.

Hab. Wallis's Island.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus SOLASTER, Forbes.

Body and rays having a reticulated calcareous framework bearing fasciculated spines ; ambulacra bordered by three sets of spines. Cirrhi biserial.

- D 43. Two specimens of the *Solaster papposa*, Linn. The natural colours are faded by exposure to the light.

Fig. Forbes, Brit. Starfishes, p. 112.

Hab. Plymouth coast, forty fathoms.

Presented by T. H. Stewart, Esq.

- D 44. A *Solaster papposa*, prepared to show the oral ambulacral surface. This surface has been denuded of its fleshy portion. Each ambulacrum has a double row of large apertures separated by calcareous pillars arranged transversely, the apertures becoming gradually smaller as they recede from the disc. At the point of juncture of the ambulacral and antambulacral perisoma, fasciculi of spines are arranged at equal distances from each other; the immediate borders of the ambulacra have a double row of long slender spines arranged in semicircular diagonal fasciculi; the oral aperture is protected by a beautiful arrangement of spines; the angles formed by the jointed origins of the rays each bear an ovate subtriangular plate, grooved down the centre, and supporting two semicircles of long tapering spines, which project in a pectinated manner over the oral aperture.

Presented by T. H. Stewart, Esq.

- D 45. A specimen of *Solaster papposa*, prepared to display the internal arrangement of its calcareous skeleton. The cirrhal apertures are large, and in a single row on either side of the central axis of the ray. The madreporiform ossicle is preserved, with its sand-canal in connexion, the furrows of the former being arranged like those of the coral termed "Brainstone": the sand-canal is short, and takes the curve somewhat of an italic *S*; it is placed interambulacrally, and opposite an ambulacrum. The antambulacral perisoma sends down points of attachment between the ambulacra at the oral ring. The interval between the rays at their base is filled up with integument strengthened by irregular calcareous ossicles; the oral set of spines are, as is always the case, situated interambulacrally. At the angle of junction of the rays an ovate subtriangular plate is situated, which is grooved down the centre, and carries two semicircles of long tapering spines, which project in a comb-like manner over the mouth.

Presented by T. H. Stewart, Esq.

- D 46. A specimen showing the antambulacral integument of *Solaster papposa* seen from within, and exhibiting the irregular reticulated framework of calcareous matter which strengthens the integument. In the interspaces between these reticulations are numerous irregularly scattered orifices, which give exit to portions of the internal perisomal membrane.

Presented by T. H. Stewart, Esq.

- D 47. A *Solaster papposa*, much bleached, but showing well the bundles of fasciculated spines.

Hab. British coast.

Hunterian.

- D 48. A very fine specimen of *Solaster papposa*, preserved in glycerine, and retaining its natural colour.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 49. Two specimens of *Solaster echinites* (*Asterias echinites*, Lam.).

Fig. Encycl. Méthod. Art. Vers, t. ii. pl. 107. A, B, C.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

Family 3. *Goniasteriæ*.

Genus PALMIPES, Link.

Body pentagonal, flat, thin, covered above and beneath with fasciculated spines ; avenues bordered by longitudinal fasciculi of spines. Cirrhi biserial.

- D 50. A large specimen of the Bird's-foot Sea-star, *Palmipes membranaceus*, Retz. The original bright scarlet colour of the centre of the body, the rays, and the border of the animal, have quite disappeared from exposure to strong light.

Fig. Forbes, Brit. Starfishes, p. 116.

Hab. Plymouth Sound.

Presented by T. H. Stewart, Esq.

- D 51. A smaller specimen of *Palmipes membranaceus*, having six rays ; the under surface is displayed.

Presented by T. H. Stewart, Esq.

- D 52. A specimen of *Palmipes membranaceus*, showing the arrangement of the calcareous particles strengthening the ambulacral perisoma of the animal, seen from within. The antambulacral integument and all the soft parts have been dissected away. The animal presents the appearance of an Ophiuran type, with the interradial space filled up with pillars of calcareous matter, the ambulacral and antambulacral perisoma being closely connected by these pillars, the animal thus having a cake-like form: these pillars are arranged in a radiating manner from the ambulacral space into two equal parts; they are larger and wider apart at the calyx, and gradually become smaller and nearer together as they recede from this part of the animal, the ambulacral and antambulacral perisoma also being further separated from each other at the calyx, and gradually approaching towards the border; each interambulacral space has a concave border, the ambulacra being rounded at the tip. Towards the calyx, the calcareous pillars in the central line of the interspace are blended together, and to these the generative organs are attached. The ambulacra are prominent, and present a single row of cirrhal pores on either side of the central axis of the ray. The interambulacral fasciculi of oral spines are similar to those in *Solaster papposa*; they do not quite close the oral aperture, but yet form a very efficient protection to the mouth. *Presented by T. H. Stewart, Esq.*

Genus ASTERINA, Nardo.

Body pentagonal, gibbous, thick, covered above and below with short spines; ambulacra bordered by a single row of spines. Cirrhi biserial.

- D 53. A specimen of *Asterina gibbosa*, Pennant, showing the ambulacral half of the animal from within. The ambulacra, five in number, are raised into considerable ridges, the interambulacral space being filled up with rounded calcareous ossicles, which bear short, somewhat conical spines externally. The oral spines, ten in number, when erected, completely close the oral aperture, as seen in this specimen.

Fig. Forbes, Brit. Starfishes, p. 119.

Hab. Plymouth, low tide.

Presented by T. H. Stewart, Esq.

Genus GONIASTER, Agassiz.

Body pentagonal, gibbous, thick, bordered by a series of laminae edged with spines; avenues bordered by transverse rows of spines. Cirrhi biserial.

- D 54. Two specimens of the Cushion-Star, *Goniaster Templetoni*, Thompson, one showing the upper, the other the lower surface.

Fig. Forbes, Brit. Starfishes, p. 122.

Hab. Plymouth coast.

Presented by T. H. Stewart, Esq.

- D 55. A specimen of *Goniaster Templetoni*, preserved in glycerine, and retaining its natural colour.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 56. The *Goniaster Templetoni*, showing the ambulacral surface from within. The ambulacra are very prominent, and the vertical ossicles large; the cirrhal pores are in a single row on either side, between the lateral plates. The madreporiform tubercle and sand-canal are preserved. The oral aperture is completely closed by the oral series of spines. In front of the oral end of the basal vertebral ossicle is a foramen for the Polian vesicle.

Presented by T. H. Stewart, Esq.

- D 57. Three species of *Goniaster*.

Fig. Encycl. Méth. Art. Vers, t. ii. pl. 100. figs. 4, 5.

Hab. Wallis's Island.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 58. A specimen of *Goniaster discoidea* (*Asterias discoidea*, Lam.).

Fig. Encycl. Méth. Art. Vers, vol. ii. pl. 97. fig. 3, pl. 98. fig. 3, and pl. 99. fig. 1.

Hab. Unknown.

Purchased.

- D 59. A specimen of *Goniaster nodosa* (*Asterias nodosa*, Linn.).

Fig. Encycl. Méth. Art. Vers, vol. ii. pls. 105, 106. fig. 1. Seba, Mus. vol. iii. pl. 7. fig. 3.

Hab. Indian Ocean.

Purchased.

- D 60. A fine specimen of *Goniaster reticulata* (*Asterias reticulata*, Linn.).
Fig. Seba, Mus. vol. iii. tab. 7, 8. fig. 1. *Encycl. Méth.* pl. 100. figs. 6-8.
Hab. Indian Ocean. *Presented by T. H. Stewart, Esq.*
- D 61. *Goniaster reticulata*, showing the upper surface.
Hab. Indian Ocean. *Presented by George Busk, Esq., F.R.S.*
- D 62. A *Goniaster* allied to *G. reticulata*. It does not possess the curious spinules or modified pedicellariæ on the under surface that *G. reticulata* has.
Hab. Indian Seas. *Presented by John Williams, Esq.*

Genus *ASTERIAS*, Linn.

Body stellate; rays flat, with a border of marginal plates; ambulacra bordered by three sets of spines. Cirrhi biserial.

- D 63. Two specimens of the Butthorn, *Asterias aurantiaca*, Linn.; one shows the centre of the calyx raised by the contents of the stomach, probably by the shell of some mollusk.
Fig. Forbes, Brit. Starfishes, p. 130. *Encycl. Méth.* pl. 110. figs. 1-5, pl. 111. figs. 1-6.
Hab. Plymouth coast. *Presented by T. H. Stewart, Esq.*
- D 64. A specimen of the *Asterias aurantiaca*, prepared to show the ambulacral surface from within. Each ray contains an internal solid axis composed of a series of quadrate ossicles, each consisting of two halves united by a longitudinal suture; each ossicle supports a ring of four plates, one antambulacral, one ventral or superambulacral, and two lateral; the cirrhal apertures are placed between the lateral plates on each side of the central axis; the madreporiform tubercle, with its connected sand-canal, is here preserved. The five comb-like bundles of oral spines may be seen, and are situated, like the teeth in the Echinidæ, interambulacrally, and are from six to seven in each bundle.
Presented by T. H. Stewart, Esq.

- D 65. Two large specimens of *Asterias aurantiaca* ?
Hab. Cape of Good Hope. *Presented by Dr. Verraux.*
- D 66. A bleached specimen of *Asterias aurantiaca*.
Hab. Cape of Good Hope. *Presented by Dr. Verraux.*
- D 67. A specimen of *Asterias aurantiaca*, in fluid, showing remarkably well the
"paxillæ" or groups of spines on the antambulacral integument.
Prepared by Mr. H. Goadby.
- D 68. A specimen of *Asterias tessellata*, Lam.
Fig. Seba, Mus. vol. iii. tab. 6. figs. 5-8. Lam. Anim. sans Vert. tab. 3.
p. 238.
Hab. Seas of Europe, America, and Great Indian Ocean.
Presented by Capt. Sir E. Home, Bart., R.N.
- D 69. A species of *Asterias* — ?
Fig. MS., College of Surgeons.
Hab. Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*
- D 70. An exotic species of *Asterias*.
Fig. MS., College of Surgeons.
Hab. Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*
- D 71. The *Asterias variolata*, Lam.
Fig. Encycl. Méth. Art. Vers, tab. ii. pl. 119. figs. 4, 5.
Hab. Mediterranean. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus *LUIDIA*, Forbes.

Body stellate ; rays flat, covered above with spiniferous tubercles ; ambulacra bordered by two sets of spines. Cirrhi biserial.

- D 72. A specimen of *Luidia fragilissima*, Forbes.
Fig. Forbes, Brit. Starfishes, p. 135 ; Wern. Mem. viii. p. 123.
Hab. Plymouth. *Presented by T. H. Stewart, Esq.*

Order IV. CIRRHI-SPINIGRADA, Forbes.—ECHINIDÆ.

This order of Echinoderms is distinguished from all the others by their more or less globular or rounded shape ; by the earthy particles of their skeleton being deposited in regular pentagonal plates, articulating closely together, and having tubercles externally, on which are articulated moveable spines ; the mouth is always below and central, and provided with a complex dental armature, the anus being opposite and superior.

Family 1. *Cidaridæ*.

Ambulacra five, waved, continuous from mouth to anus ; ovaries five ; inter-ambulacral plates provided with one primary tubercle, which is perforate ; spines of several forms ; the secondary spines embrace the base of the primary ; the ambulacra bordered by secondary spines.

Genus CIDARIS, Leske.

D 73. A specimen of *Cidaris grandis*, Quekett.

Fig. MS., College of Surgeons.

Hab. Pacific Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

D 74. A fine specimen of *Cidaris cucumerina*, Klein.

Fig. Klein, tab. 36. figs. A, B.

Hab. Southern Ocean.

Purchased.

D 75. A fine specimen of *Cidaris geranioides*, Lam. The teeth in this animal are of large size, and may be seen projecting considerably beyond the peristomal membrane.

Fig. Agass. Echin. pl. 15. fig. 1. Lam. vol. iii. p. 380.

Hab. Locality unrecorded.

Purchased.

D 76. An undescribed species of *Cidaris*.

Fig. MS., College of Surgeons.

Hab. Locality unrecorded.

Hunterian.

- D 77. A small specimen of *Cidaris tribuloides*, Lam.
Fig. Encycl. Méth. Art. Vers, t. ii. pl. 136. figs. 4, 5.
Hab. Indian Ocean. *Presented by John Quekett.*
- D 78. A small specimen of *Cidaris hystrix*, Lam.
Fig. Lam. vol. iii. p. 379.
Hab. Malta. *Presented by G. E. Blenkins, Esq., F.R.C.S.E.*
- D 79. The *Cidaris metularia*, Lam.; some of the spines have a species of *Carpentaria* on them.
Fig. Seba, Mus. vol. iii. pl. 13. fig. 11.
Hab. Isle of France. *Purchased.*
- D 80. The *Cidaris metularia*, Lam.
Fig. Seba, Mus. vol. iii. pl. 13. fig. 11.
Hab. Isle of France. *Presented by John Quekett.*
- D 81. The *Cidaris equisetispinis*, Quek.
Fig. MS., College of Surgeons.
Hab. China. *Purchased.*
- D 82. Several small specimens of the genus *Cidaris*.
Fig. MS., College of Surgeons.
Hab. Localities unrecorded. *Hunterian and purchased.*
- D 83. The corona of *Cidaris imperialis*, Lam., denuded of its spines. The double row of large tubercles from the mouth to the anus, interambulacral, are clearly seen; they gradually become smaller from the centre of the corona towards both mouth and anus, being surrounded at their base with a circle of small tubercles for the secondary spines, which embrace the primary. Each primary tubercle has a depression in the centre for the attachment of a ligament that assists in fixing the spine to the tubercle. The antambulacral ring of plates is distinct from the ambulacral corona, and the ossicles of the anal perisoma are not scattered as in *Echinus*, but closely, yet moveably articulated with each other; the genital orifices are large; the madreporic plate presents,

to the naked eye, but little difference from the rest of the genital plates, but when slightly magnified is seen to be minutely porous.

Fig. Seba, Mus. vol. iii. pl. 13. fig. 3.

Hab. Red Sea. New Holland.

Hunterian.

- D 84. The disarticulated splanchnic skeleton of *Cidaris imperialis*. The opposed surfaces of the pairs of *alveoli* are non-striated, and there are no serrations on the bodies; the interalveolar suture is broad and long, and extends nearly the whole length of the alveolus; the upper surface presents a pyramidal process, on the external side of which is a concave articular surface, corresponding to a convex one on the *epiphyses*; the epiphyses do not arch over the alveoli, but end superiorly in a triangular point. The teeth are hollowed out like a boat, but have not a central ridge like the *Echinus*; they are also more curved. The *falces* exhibit a deep notch on either side; the œsophageal end presents also a deeply concave border. The *rotulæ* are short; the shaft is laterally compressed; the free extremity is broad and bifid.

Prepared by T. H. Stewart, Esq.

- D 85. A portion of the splanchnic skeleton of a large *Cidaris*; viz. a pair of alveoli, with epiphyses and tooth *in situ*, another pair separated; also a falx and rotula.

Prepared by T. H. Stewart, Esq.

- D 86. A series of spines of various shapes, taken from *Cidaris hystrix*, Lam.

Presented by John Quekett.

- D 87. A spine of a species of *Cidaris*, probably *C. hystrix*, about 5 inches in length.

Presented by John Quekett.

- D 88. A club-shaped spine of a species of *Cidaris*. *Presented by John Quekett.*

- D 89. A series of spines of a species of *Cidaris*, to which the shells of *Serpulæ* and a variety of foreign bodies are attached.

Fig. Quekett's Lectures on Histology, vol. ii. p. 230.

Presented by John Quekett.

- D 90. A series of spines of two or more species of *Cidaris*, some in their natural state, others covered with a coating of carbonate of lime.

Presented by John Quekett.

- D 91. Spines of a large *Cidaris*, which have been divided both transversely and longitudinally, to show that each is made up of a single cone, and not of a series of cones superimposed, like those of the *Echini*.

Fig. Quekett's Lectures on Histology, vol. ii. p. 220.

Presented by John Quekett.

Genus *DIADEMA*, Gray.

Body orbicular, rather depressed ; ambulacra straight ; spines very long, slender, tubular, covered with oblique annulations of imbricated scales.

- D 92. A specimen of *Diadema*.

Fig. MS. in Coll. of Surgeons.

Hab. St. Helena.

Presented by John Quekett.

Family 2. *Echinidæ*.

Ambulacra five, straight, continuous from the mouth to the anus ; inter-ambulacral plates provided with several primary tubercles, imperforate ; spines of one form, scattered.

Genus *ECHINUS*, Linn.

Body globose ; anus and mouth both central ; spines of one form.

- D 93. A very large specimen of *Echinus sphaera*, Müller. It measures around the greatest circumference of the corona 23 inches, and from the anus to the mouth around the shell, 10 inches ; and from the same points direct, $5\frac{1}{2}$ inches. The spines are very numerous and small, and of a light violet tint. The madreporic plate is very large, prominent and rounded, and covered with spines.

Fig. Forbes, Brit. Starfishes, p. 149.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 94. A smaller specimen of *Echinus sphæra*, showing the lower or oral surface.
Hab. Plymouth. *Presented by T. H. Stewart, Esq.*
- D 95. Three specimens of *Echinus sphæra* in a young state, one (A) of normal, the other two (B and C) of abnormal form. In B the anus is nearly three-quarters of an inch out of its natural position; it is drawn to that side of the corona on which the madreporic plate is situated, and this part of the corona is much flattened from above, the other consequently bulging out, or appearing to do so. In C the corona is unnaturally elongated, or barrel-shaped.
Hab. Plymouth. *Presented by T. H. Stewart, Esq.*
- D 96. A very young specimen of *Echinus sphæra*.
Hab. Plymouth. *Presented by T. H. Stewart, Esq.*
- D 97. The corona of a large *Echinus sphæra* divided vertically, and showing the dental apparatus, termed the "Lantern of Aristotle."
Fig. Quekett's Lectures on Histology, vol. ii. p. 232. *Hunterian.*
- D 98. The splanchnic skeleton of *Echinus sphæra*, removed from the animal, together with a portion of the peristomal membrane. It shows how the several pieces composing this dental apparatus are united together in the shape of a cone, the apex being formed by the points of the teeth.
Presented by T. H. Stewart, Esq.
- D 99. A portion of the oral apparatus of *Echinus sphæra*. Two of the pairs of alveoli have been removed in order to display the course of the œsophagus, which, from its attachment around the apices of the alveoli and teeth, passes up in the centre of the oral apparatus, being supported in position by ligamentous bands passing from it to the bifurcations of the falces. Between the alveoli may be seen the dried interalveolar muscles, and a few of the fibres are left on one side where the two pairs of alveoli have been separated.
Presented by T. H. Stewart, Esq.
- D 100. An alveolus of *Echinus sphæra*, with epiphysis, falx, rotula, and entire tooth *in situ*.
Presented by T. H. Stewart, Esq.

- D 101. The peristomal membrane of *Echinus sphæra*; it is strengthened by small oval calcareous plates, which give support to minute spines; within a short distance of the orifice for the teeth, larger ovoid plates are placed, having a rounded excavation, in the centre, and in the middle of this a perforation; on this perforation a fleshy tube is situated, which supports at its free extremity an oval calcareous fimbriated piece having a linear perforation, and is a modified cirrhus, and probably acts tentacularly; the Pedicellariæ that abundantly surrounded them have been removed.

Presented by T. H. Stewart, Esq.

- D 102. A specimen of *Echinus sphæra*, bisected transversely: in the lower, or *oral* half, may be seen the Lantern of Aristotle, with the muscles that act on the jaws preserved *in situ*; they are slightly tinted with red, to make them more evident. The five aquiferous canals, with their lateral branches passing to the cirrhal vesicles, are well seen, as also the points of attachment of the intestinal canal. In the upper or *anal* half, the interior has been cleaned; it shows the pores through which the cirrhi communicate with their vesicles in the ambulacra. The short, thick, black bristles pass through the openings of the oviducts, the longer and thinner through orifices connected with the aquiferous canal. The anal opening itself is much contracted.

Presented by T. H. Stewart, Esq.

- D 103. The antambulacral ring of plates of *Echinus sphæra*, at A entire, at B separated; they consist of ten single plates, forming a ring around the anal perisoma, but in close articulation with the root of the corona; each plate is pentagonal; there are five small or intergenital, and five large or genital, which alternate with each other, the intergenital being ambulacral, and the genital interambulacral; each plate is perforated; that in the intergenital plate is small, and communicates with the aquiferous canal; that in the genital plate is much larger, and is for the exit of the generative products; one of the genital plates is minutely perforated, and distinguished as the madreporic plate; the irregular oval plates on the perisoma bear small spines on their external surface.

Presented by T. H. Stewart, Esq.

- D 104. The disarticulated splanchnic skeleton of *Echinus sphæra*, which is formed of forty separate pieces, five pairs of alveoli, five pairs of epiphyses to these, five radii each divided into two portions, five falces, and five teeth.

Presented by T. H. Stewart, Esq.

- D 105. An ambulacrum, an interambulacrum, and half of another interambulacrum of a small *Echinus sphæra*.

Presented by T. H. Stewart, Esq.

- D 106. Two fine specimens of *Echinus Flemingii*, Ball; one showing the upper, the other the lower part of the corona.

Fig. Forbes, Brit. Starfishes, p. 164.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 107. An *Echinus Flemingii*, denuded of its spines.

Hab. British coast.

Presented by John Quekett.

- D 108. The "Pedicellariæ" of *Echinus Flemingii*, removed from the corona. They are of two kinds, one a simple forceps, the other three-pronged and larger; they each have a calcareous stem, which is fixed on small tubercles scattered over the corona; a fleshy portion succeeds to this, and then the calcareous spinules.

Presented by T. H. Stewart, Esq.

- D 109. A small portion of the corona of an *Echinus Flemingii*, exhibiting repair of an injury.

Presented by T. H. Stewart, Esq.

- D 110. A partially separated splanchnic skeleton of *Echinus Flemingii*; the five pairs of alveoli are separated from each other, but each half is left united with its fellow-half, whilst the teeth are retained in their natural position. The epiphyses of the alveoli are also preserved *in situ*. The falces are separated, the rotulæ kept entire, and connected together by the inter-radial muscles.

Presented by T. H. Stewart, Esq.

- D 111. The parts composing the splanchnic skeleton and oral portion of the corona of *Echinus Flemingii*, entirely separated from each other. They

do not differ essentially from the same parts of *Echinus sphaera*, but are rather stronger, and the teeth slightly broader. The auricula are very large and broad, and the interambulacral plates at the oral edge, between the auricula, are considerably elevated. The peristomal membrane is naked, having only the five pairs of oval perforated plates for the support of the modified ambulacral cirrhi.

Prepared by T. H. Stewart, Esq.

- D 112. An *Echinus lividus*, Lam. This species lives in crevices in the rocks, supposed to be excavated by itself.

Fig. Forbes, Brit. Starfishes, p. 167.

Hab. Valentia.

Presented by E. W. Cooke, Esq., F.L.S.

- D 113. A small specimen of *Echinus lividus*.

Hab. Mediterranean.

Purchased.

- D 114. Two specimens of *Echinus lividus*, Lam.

Hab. Wellington, New Zealand. Presented by R. K. Prendergast, M.D.

- D 115. The *Echinus miliaris*, Leske.

Fig. Forbes, Brit. Starfishes, p. 161.

Hab. Brighton.

Presented by John Quekett.

- D 116. The *Echinus miliaris*, denuded of its spines.

Hab. Brighton.

Presented by John Quekett.

- D 117. Two specimens of *Echinus miliaris*, one denuded of its spines. They may be compared with the preceding to show the difference which locality sometimes makes in the colour and other characters of a species.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

- D 118. Ten small specimens of *Echinus miliaris*, deprived of their spines; they were taken from the stomach of a Wolf-fish, *Anarrhicas Lupus*.

Presented by John Quekett.

- D 119. The *Echinus esculentus*, Lam.

Fig. Lam. Hist. Nat. vol. iii. p. 358.

Hab. Mediterranean.

Presented by John Quekett.

- D120. The oral half of the corona or shell of *Echinus esculentus*, with the dental apparatus *in situ*.
Prepared by Mr. H. Goadby.

- D 121. Three coronæ of *Echinus excavatus*, Lam. ; they are of light green colour, without any trace of spines.
Fig. Lam. Hist. Nat. vol. iii. p. 375.
Hab. Martinique. Presented by John Quekett.

Genus TRIPNEUSTES, Agass.

Shell of large size ; tubercles slightly prominent, bearing small spines ; pores forming three double vertical rows well separated, the two exterior rows rectilinear and regular, the middle row irregular ; mouth small, circular, moderately incised ; jaws strong ; teeth tricarinate ; radii very crooked, bent out, without transverse muscles. Species both recent and fossil.

- D 122. Two specimens of *Tripneustes ventricosus*, Agass (*Echinus ventricosus*, Lam.).
Fig. Lam. Hist. Nat. vol. iii. p. 359.
Hab. Martinique. Hunterian.

Genus TEMNOPLEURUS, Agass.

Form circular and subconical ; two principal series of interambulacral tubercles crenated, but not perforated ; the deep impressions correspond to the sutures of the plates in the ambulacral areas, as well as in the interambulacral areas, but only on the upper surface ; the ambulacral pores are arranged in triple pairs ; "lantern" strong ; auricula short and thin. This genus differs from *Salmacis* in the markings, which give it a sculptured appearance. Only living species known.

- D 123. A specimen of *Temnopleurus toreumaticus*, Agass. (*Echinus sculptus*, Lam.).
Fig. Encycl. Méth. Art. Vers, t. ii. pl. 142. figs. 4-5 ; Klein, t. x. D. & E.
Hab. Indian Ocean. Purchased.

- D 124. A smaller specimen of *Temnopleurus toreumaticus*, in which the tubercles for the minute spines at the base of the larger ones are well shown.

Purchased.

Genus *MESPILIA*, Desor.

The ambulacral and interambulacral areas are smooth in their median line, and only bordered with tubercles on their side, with the exception of the inferior surface, which is very tuberculous; tubercles small; angular pores at the junction of the coronal plates as in *Temnopleurus*; the ambulacral pores arranged in many vertical series; auricula closed; auricular circle slightly elevated; buccal membrane naked, strongly plicated; "lantern" the same as in *Echinus*, but more elongated.

D 125. Three species of the genus *Mespilia*, Desor.

Fig. Ann. des Sc. Nat. Cat. Raisonné des Echinides, Ag. and Des. pl. 15.
fig. 17. p. 358.

Hab. Tongataboo.

Purchased.

Genus *ACROCLADIA*, Agass.

Shape elongated; corona very thick, furnished with very large tubercles, imperforate, and non-crenated; spines very large, smooth in appearance, though finely striated, of variable form according to the situation on the corona; those that surround the mouth are flattened and much shorter than the others; pores disposed in arches; mouth large, without deep notches; buccal membrane smooth; auricula closed; "lantern" weak in proportion to the thickness of the corona; structure the same as in *Echinometra*; alveoli strongly sloped out; teeth tricarinate. The known species are all recent.

D 126. A large specimen of *Acrocladia trigonaria*, Agass. (*Echinus trigonarius*, Lam.).

Fig. Seba, Mus. vol. iii. p. 13. fig. 4.

Hab. South Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

D 127. A large specimen of *Acrocladia trigonaria*, with its spines carefully arranged; its oral surface is uppermost, and the "lantern" detached and displayed.

Presented by Capt. Sir E. Home, Bart., R.N.

D 128. The corona of *Acrocladia trigonaria*, denuded of its spines, having also lost the anal ring of plates.

Presented by John Quekett.

- D 129. The disarticulated splanchnic skeleton of *Acrocladia trigonaria*. The serrations of the opposed borders of the alveoli and of the serrated surfaces are well marked; at the basal end of the interalveolar symphysis is a long slender styloid process, which, together with one from each interepiphysial articulation, serves to support the teeth; the radii are short and much expanded at their bifid end; the sides of the falces are straight.

Prepared by T. H. Stewart from a specimen presented by John Quekett.

- D 130. An *Acrocladia mammillata*, Lam.

Fig. Encycl. Méth. Art. Vers, t. ii. pl. 138. figs. 1-4.

Hab. East Indies.

Hunterian.

- D 131. The corona of *Acrocladia mammillata*, denuded of its spines. *Hunterian.*

- D 132. Two specimens of *Acrocladia*, allied to *A. mammillata*, with dark brown spines without white annulations.

Hab. Vavou.

Presented by Capt. Sir E. Home, Bart., R.N.

- D 133. A series of coronæ belonging to one or more species of *Acrocladia*.

Hunterian.

Genus PODOPHORA, Agass.

Form lengthened; corona thick; spines in form of closely-placed polyhedral discs, like mosaic, on the upper parts of the corona, in the form of more or less compressed clubs on the inferior border; ambulacra very large, especially on the inferior surface; tubercles imperfectly mammillated; there are only two rows of them on the ambulacral area, whilst the interambulacral rows are numerous; pores arranged in arches of from nine to twelve pairs, which curve around the ambulacral tubercles; mouth large, not notched; buccal membrane smooth, with the exception of ten calcareous plates destined for ambulacral buccal tubes of the mouth; auricula thin, scarcely attached; "lantern" of moderate height; the radii are transversely truncated; the transverse arches show a little hollow for the tooth; the teeth themselves are truncated.

D 134. A large specimen of *Podophora atrata*, Agass. *Purchased.*

D 135. Several specimens of *Podophora atrata* (*Echinus atratus*, Lam.).

Fig. Encycl. Méth. Zooph. t. ii. pl. 140. figs. 1-4.

Hab. Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

D 136. The disarticulated splanchnic skeleton of *Podophora atrata*. The opposed surfaces of the alveolar pair are very distinctly striated in a slightly waving manner, and the serrations of the opposed borders very long and expanded at the end; a short styloid process is prolonged upwards from the interalveolar suture for the support of the teeth; the points of the teeth are blunter and less curved than in *Echinus*; the sides of the falces are straighter, with the œsophageal border bifid or deeply concave; the rotulæ are very arched, and the bifurcation at the free end well marked; the auricula are small and delicate.

Prepared by T. H. Stewart from a specimen presented by Capt. Sir E. Home, Bart., R.N.

D 137. A *Podophora atrata* of large size, denuded of its spines. *Purchased.*

D 138. A small specimen of *Podophora atrata*, denuded of its spines.

Presented by Capt. Sir E. Home, Bart., R.N.

Un-identified species of Echini.

The following specimens of *Echinus* have not yet been specifically identified.

D 139. Two coronæ of a species of *Acrocladia*; they are of a light brown colour, and are probably the same as D 132.

Hab. Vavou.

Presented by Capt. Sir E. Home, Bart., R.N.

D 140. A large specimen of *Echinus*, somewhat like *E. esculentus*, with spines about three-fourths of an inch in length, of a purple colour tipped with white.

Hab. Locality unrecorded.

Hunterian.

- D 141. A smaller specimen of an allied species, in which the spines are all of nearly uniform size, but of a yellowish-white colour.

Hab. Locality unrecorded.

Hunterian.

- D 142. A still smaller specimen of the last-described *Echinus*, with yellowish-white spines.

Hab. Locality unrecorded.

Hunterian.

- D 143. A small specimen, probably of the same species of *Echinus* as D 140, having the greater part of the spines of purple colour tipped with white.

Hab. Locality unrecorded.

Hunterian.

- D 144. A large *Echinus*, somewhat like *E. Flemingii* in shape; it is covered with short stout white spines, which stick out boldly from the corona; they are not so thickly placed, however, but that the ambulacra can be plainly seen.

Hab. Locality unrecorded.

Presented by John Quekett.

- D 145. A large corona of an *Echinus*, in shape somewhat like *E. esculentus*; it is denuded of its spines, and is of a reddish-brown colour.

Hab. Mediterranean.

Presented by Madame Jeannette Power.

- D 146. The corona of an *Echinus*, divided transversely, to show in the oral half the "lantern," and in the anal the ambulacral pores.

Hab. Locality unrecorded.

Hunterian.

- D 147. A large *Echinus*, with purple spines, somewhat resembling *E. lividus*, but they are much shorter and less pointed.

Hab. Locality unrecorded.

Purchased.

- D 148. A smaller specimen of *Echinus*, probably of an allied species, in which the spines are of a reddish-brown colour.

Hab. Locality unrecorded.

Purchased.

- D 149. The lower or oral half of the corona of a small species of *Echinus*, probably *E. esculentus*, to show the "Lantern of Aristotle."

Prepared by Mr. Henry Goadby.

- D 150. A species of *Echinus*, having a corona of oval figure covered with stout, conical, sharp-pointed, grooved spines of green colour, and on an average one inch in length.

Hab. Locality unrecorded.

Hunterian.

- D 151. Two specimens of *Echini*, probably of the same genus as the one last described. The coronæ in all are of oval figure, and the spines stout, conical, grooved, and of greenish hue.

Hab. Locality unrecorded.

Hunterian.

- D 152. Two coronæ, probably of the same species of *Echinus* as the last described, but wholly denuded of their spines.

Hab. Locality unrecorded.

Hunterian.

- D 153. Small *Echini* of the same species as D 150, 151, one of which has its coating of green grooved spines, whilst the other is almost entirely denuded of them.

Hab. Locality unrecorded.

Hunterian.

- D 154. A small *Echinus*, somewhat resembling the preceding specimen ; but its spines, although grooved, are of a pink colour, and rather longer and thinner.

Hab. Locality unrecorded.

Hunterian.

- D 155. Four small *Echini*, probably young specimens of D 150. Those marked A, B, and C have recently been taken out of spirit.

Hab. China.

Purchased.

- D 156. A small *Echinus*, possibly a young one of the same species as D 154 ; its spines are longer and thinner than those of the preceding specimen, and of a pinkish hue.

Hab. Locality unrecorded.

Hunterian.

- D 157. An *Echinus*, having a flattened corona covered with thin, conical, grooved spines, on an average three-fourths of an inch in length, and not more than one-twentieth of an inch in diameter.

Hab. Locality unrecorded.

Hunterian.

- D 158. A smaller specimen of *Echinus*, somewhat like the last, but having shorter spines, and these of a light brown colour.

Hab. Locality unrecorded.

Hunterian.

- D 159. Two coronæ of an *Echinus*; they are of a light green colour, subcompressed; one of them has been divided vertically, to show the "lantern."

Hab. New Zealand.

Presented by R. K. Prendergast, M.D.

- D 160. The oral portion of a similar species of *Echinus*, in which the "lantern" is well shown. Traces of spines remain, and these, like the corona, are of a light green colour.

Presented by R. K. Prendergast, M.D.

- D 161. Three specimens of species of *Echinus*, allied to the last, but having the tubercles for the spines more numerous and more uniform in size.

Hab. Locality unrecorded.

Hunterian.

- D 162. Two coronæ of an *Echinus*, both of which are of subcompressed figure, and remarkable for having the two rows of tubercles for the spines nearest the ambulacra much larger than any of the others.

Hab. Locality unrecorded.

Hunterian.

- D 163. The corona of an *Echinus*, probably of the same species as the above; it is of a light green colour, although the arrangement of the tubercles is similar.

Hab. Locality unrecorded.

Hunterian.

- D 164. The corona of a large *Echinus*, probably a species of *Acrocladia*; it is of subcompressed figure, and has large tubercles.

Hab. Locality unrecorded.

Hunterian.

- D 165. An *Echinus*, having a subcompressed whitish corona, covered with delicate pale green spines, all of which are grooved like those belonging to Nos. D 150, 151.

Hunterian.

- D 166. Two coronæ of a small species of *Echinus*, which are of a reddish-brown

colour externally ; they both have traces of very small spines upon the oral surface : judging from the size of the tubercles, those in other situations must have been equally minute.

Hab. Locality unrecorded.

Hunterian.

- D 167. The denuded corona of a small species of *Echinus*, in shape somewhat like *E. Flemingii*. The tubercles for the spines are peculiarly arranged, and there is either a single or double row between the two closely approximated rows of each of the ambulacral pores.

Hab. Mediterranean.

Presented by Madame Jeannette Power.

- D 168. Two coronæ of an undescribed species of *Echinus*, of a light green colour, both of which are remarkable for the flattened condition of their five sides.

Hab. Locality unrecorded.

Purchased.

- D 169. The corona of an *Echinus*, having five sides flattened like those of D 168, but remarkable for two rows of rhombohedral spaces between the ambulacra, without any tubercles upon them ; these spaces are of a brown colour, and very apparent.

Hab. Locality unrecorded.

Purchased.

- D 170. Two coronæ of an undescribed species of *Echinus*, having the same arrangement of spines as those of D 162 and 163 ; but the shape of both is oval, and they have a bleached appearance.

Hab. Locality unrecorded.

Hunterian.

- D 171. The corona of an *Echinus*, of oval figure ; it is much compressed laterally, and is more than half an inch higher than any of the other oval coronæ in the Collection.

Hab. Locality unrecorded.

Hunterian.

- D 172. Four spines of a large specimen of *Acrocladia trigonaria*, Agass., some of them exceeding $4\frac{1}{2}$ inches in length.

Presented by John Quekett.

- D 173. A vertical section of a spine of *Acrocladia trigonaria*, showing it to be made up of a series of superimposed cones. *Presented by John Quekett.*
- D 174. A series of spines of a smaller specimen of *Acrocladia trigonaria*.
Presented by John Quekett.
- D 175. A series of spines of *Acrocladia trigonaria*, all of which have been broken transversely, and some of them are in process of reparation, the new part being of conical figure. *Presented by John Quekett.*
- D 176. Two spines of *Acrocladia trigonaria*, divided vertically, the larger one showing three, and the smaller four indications of repair after fracture.
Presented by John Quekett.
- D 177. The spine of a large *Echinus*, of a light brown colour, and differing from those of *Acrocladia trigonaria* in being perfectly round.
Presented by John Quekett.
- D 178. A series of spines of *Echinus mammillaris*, of various shapes, some of which exhibit marks of teeth, and one has been fractured transversely.
Presented by John Quekett.
- D 179. Three spines of an *Echinus*, probably allied to *Acrocladia trigonaria*; they are of large size, rounded figure, but purple in colour; one of them exhibits marks of teeth.
Hab. Locality unrecorded. *Presented by John Quekett.*
- D 180. A series of spines taken from the lower or *oral* surface of the corona of *Acrocladia mammillata*; they are little more than half an inch in length, and have their free extremities expanded like the blade of an oar.
Hunterian.
- D 181. A series of very minute spines taken from the upper or *anal* portion of the corona of *Acrocladia mammillata*; they are about one-fourth of an inch in length, and their free extremities are much broader in proportion to their size than those from the *oral* surface. *Hunterian.*

- D 182. A few specimens of the compressed form of spine taken from the upper or *anal* part of the corona of *Podophora atrata* ; some of them have their attached surfaces uppermost, to show the cup-shaped articulation.

Prepared from a purchased specimen.

- D 183. A small portion of a spine of a large *Echinus*. It is of oval figure and covered with angular tubercles externally, like those in some of the *Cidares*.

Presented by John Quekett.

- D 184. A series of flattened discs, one of which is found upon the free extremity of each of the peristomal cirrhi of *Podophora atrata* : in this Echinoderm they attain their largest size.

Prepared from a purchased specimen.

- D 185. One half of the corona of an *Echinus*, showing the deposition of a thin layer of shell connecting two of the auricula, and forming a cavity like a tympanic bulla. On the exterior may be seen a small opening of communication, which, from its rounded edges, would appear to have been made during life.

Hunterian.

- D 186. The lower half of the corona of a species of *Echinometra*, to show the auricula.

Prepared from a Hunterian specimen.

Family 3. *Clypeasteriæ*.

Mouth and anus below ; the mouth central and armed with teeth ; avenues not continuous ; ovaries five.

Genus ECHINOCYAMUS, Leske.

Body oval, with rounded sides ; avenues dorsal, short ; anus between the mouth and the hinder margin.

- D 187. A series of specimens of the Green-pea Urchin, *Echinocyamus pusillus*, Leske. They are denuded of their spines, and some of them are placed with their dorsal, others with their oral surface uppermost. They vary

much in size, the largest being about one-quarter, and the smallest not more than one-twelfth of an inch in their long diameter; all of them were found in the intestinal canal of a large *Spatangus purpureus*.

Hab. Brighton.

Presented by John Quekett.

Genus CLYPEASTER, Lam.

Disc oval or subpentangular; ambulacra forming at the summit a large star, the rays of which are rounded at their extremity; anus inferior and marginal. The internal cavity is divided into chambers by vertical pillars. The shell is very thick. Several fossil species occur in the tertiary deposits, and some living.

D 188. Four specimens of *Clypeaster rosaceus*, Lam.

Fig. Deslongch. Encycl. t. ii. p. 199. Encycl. Méthod. ii. pl. 144. figs. 6, 7.

Hab. African coast.

One of these specimens exhibits an interesting example of distortion and monstrosity, in having only *four* of the petaloid ambulacra developed instead of five, the buccal region more concave, and the anal opening placed to the right of the usual position.

Hunterian.

D 189. A species of *Clypeaster* allied to *C. explanatus*, Gray. A portion of the corona has been broken away, and shows the trabeculæ or calcareous pillars passing from one surface of the corona to the other internally.

Hab. African coast.

Presented by John Quekett.

D 190. The splanchnic skeleton of a species of *Clypeaster*. It is much less complex than in *Echinus*; it presents five pairs of alveoli, the halves of which are anchylosed together; the opposed surfaces of the alveolar pairs are alæform, the adjoining surfaces of the alveoli are deeply channelled, and some of the ridges are bifurcated at the edges; there are no "rotulæ;" the falces are anchylosed to the alveoli; the teeth are short, slightly curved, and semitransparent at the tip for about one-third of their length; the auricula are not arched, being merely curved processes developed from the corona.

Presented by T. H. Stewart, Esq.

- D 191. A species of *Clypeaster*, with the splanchnic skeleton seen *in situ*.

Presented by John Quekett.

- D 192. A species of *Clypeaster* allied to *C. rosaceus*.

Fig. MS., College of Surgeons.

Hab. South Seas.

Presented by John Quekett.

- D 193. A specimen of *Clypeaster*.

Hab. Australia.

Presented by Lieut. Burnaby, R.N.

- D 194. A specimen of *Clypeaster*.

Hab. Australia.

Presented by Charles Stokes, Esq., F.R.S.

Genus *LAGANUM*, Klein.

Form depressed, pentagonal, subpentagonal or ovoid, truncated behind, rostrated in front; ambulacral petals elongate, narrow, and only slightly rounded at the end; ovarian pores four or five, contiguous to the madreporiform plate; cavity simple, except near the margin; mouth small, open to the level of the shell; jaws large, rather flat; vent below.

- D 195. The *Laganum orbiculare*, Boccon.

Fig. Cat. Brit. Mus. Echin. part 1. p. 13.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart.

- D 196. The *Laganum Zealandii*, Gray.

Fig. Cat. Brit. Mus. Echin. part 1. p. 15.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart.

Genus *ECHINARACHNIUS*, Leske.

Body very much depressed, circular; ambulacra dorsal, five; the ambulacral spaces broader than the interambulacral; anus marginal, superior.

- D 197. A specimen of *Echinarachnius placenta*, Gmelin.

Fig. Forbes, Brit. Starfishes, p. 178.

Hab. Zetland.

Presented by Charles Stokes, Esq., F.R.S.

Family 4. *Scutellidæ*.

Genus ECHINODISCUS, Gray.

Shell flat, subcircular, with a slit or holes in the hinder part of the two hinder ambulacral areas; ambulacral petals closed; inferior ambulacral grooves waved or slightly branched; mouth small; jaws flat; vent inferior, more or less far from the edge; ovarian pores four, contiguous to the madreporiform body.

D 198. Four specimens of *Echinodiscus bifora*, Gray; *Scutella bifora*, Lam.

Fig. Cat. Brit. Mus. Echin. part 1. p. 20.

Hab. Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

D 199. The *Echinodiscus inaurita*, Gray; *Scutella inaurita*, Blainv.

Fig. Cat. Brit. Mus. Echin. part 1. p. 21.

Hab. Mauritius.

Presented by Charles Stokes, Esq., F.R.S.

D 200. Two specimens of *Echinodiscus truncata*, Gray; *Scutella bifora*, Lam.

Fig. Cat. Brit. Mus. Echin. part 1. p. 20.

Hab. Indian Ocean.

Presented by Charles Stokes, Esq., F.R.S.

Genus ENCOPE, Agass.

Shell nearly circular, truncated behind, with six lunules or slits on the edge, one at the end of each ambulacrum, and one on the odd posterior interambulacral area; ambulacral petals closed; the marginal tesseræ of the ambulacral bands short, broad, transverse, band-like; large dorsal spines with ovate heads; inferior ambulacral grooves much branched; mouth central, round; jaws flat.

D 201. Four specimens of *Encope Stokesii*, Agass.

Fig. Cat. Brit. Mus. Echin. part 1. p. 27.

Hab. South America.

Presented by Charles Stokes, Esq., F.R.S.

Genus MELLITA, Klein.

Body subcircular, very flat, truncated behind, with five or six elongated perforations or lunules, the hinder corresponding with the odd interambulacral area; ambulacral petals closed; inferior ambulacral grooves much waved; larger spines of the back capitate; vent very near the mouth; ovarial pores four.

D 202. *Mellita hexapora*, Agass.; *Scutella sex-foris*, Lam.

Fig. Cat. Brit. Mus. Echin. part 1. p. 23.

Hab. West Indies. Martinique.

Presented by John Quekett.

D 203. *Mellita testudinea*, Agass.; *Scutella quinquefora*, Lam.

Fig. Cat. Brit. Mus. Echin. part 1. p. 22.

Hab. West Indies. South America.

Presented by John Quekett.

Family 5. *Spatangidæ*.

Body elongate, more or less gibbous; mouth beneath, excentric, edentulous; anus posterior; test thin, with numerous small tubercles, and some large ones which are often perforated; four genital pores, more or less remote.

Genus SPATANGUS, Klein.

Body cordate, depressed, having two sets of ambulacra, dorsal and oral, four of the dorsal ambulacra petaloid; no dorsal impression; subanal impression transverse, subinferior.

D 204. Three specimens of the Purple-heart Urchin, *Spatangus purpureus*, Müll.

Fig. Forbes, Brit. Starfishes, p. 182.

Hab. Brighton.

All these coronæ are of a purple colour, arising in great measure from their having been dried rapidly before a fire after death. One of them is denuded of its spines.

Presented by John Quekett.

D 205. A specimen of *Spatangus purpureus*, opened, and showing the coiled intestine *in situ* filled with sand.

Hab. British coasts.

Hunterian.

Genus SCHIZASTER, Agass.

Shell broad, depressed in front, high and narrow behind, with the apex very near to the hinder edge ; ambulacra very deep ; spines of the plastron larger, longer, cylindrical, dilated at the end, spade-like ; ovarian pores two, rarely three or four, the posterior being the most permanent ; ocellar pores five.

D 206. The *Schizaster canaliferus*, Lam.

Fig. Encycl. Méth. pl. 156. figs. 1-3.

Hab. Mediterranean.

Presented by Madame Jeannette Power.

Genus AMPHIDETUS, Agass.

Body ovate or cordate, convex, having two sets of ambulacra, dorsal and oral ; four of the dorsal ambulacra truncate, oblong ; dorsal impression within the ambulacra ; subanal impression ovato-cordiform, terminal.

D 207. The *Amphidetus cordatus*, Temm. sp. ; *Spatangus arcuarius*, Lam.

Fig. Encycl. Méth. pl. 156. Forbes, Brit. Starfishes, p. 190.

Hab. Walton-on-the-Naze. Seas of Europe.

Presented by Charles Brooke, Esq., M.A., F.R.S.

D 208. Various specimens of *Amphidetus cordatus*, denuded of their spines.

Hab. Brighton.

Presented by John Quekett.

D 209. Three specimens of *Amphidetus ovatus*, Agass. ; *A. roseus*, Forbes.

Fig. Forbes, Brit. Starfishes, p. 194.

Hab. Seas of Europe.

Presented by Madame Jeannette Power.

Genus BRISSUS, Klein.

Shell depressed ; hinder edge vertical ; anterior lateral ambulacra bent forwards.

D 210. Two specimens of the *Brissus Scillæ*, Agass.

Fig. Cat. Brit. Mus. Echin. part 1. p. 52.

Hab. Mediterranean.

Presented by Madame Jeannette Power.

Order V. HOLOTHURIADÆ.

Family 1. *Pentactæ*.

Genus CUCUMARIA, Blainv.

Body regular, more or less pentangular, with five longitudinal rows of approximate suckers ; tentacula ten ; dental apparatus composed of nearly square plates.

D 211. The great Sea-Cucumber, *Cucumaria frondosa*, Gunner ; *Pentacta frondosa*, Jaeger.

Fig. Forbes, Brit. Echin. p. 209.

Hab. Shetland.

Prepared by Mr. H. Goadby.

D 212. A small specimen of *Cucumaria frondosa*. It was arrested in the act of discharging its alimentary canal, which these animals have the power of reproducing.

Fig. Forbes, Brit. Echin. p. 209.

Hab. Shetland.

Prepared by Mr. H. Goadby.

Genus OCNUS, Forbes.

Body regular, cylindrical, pentagonal, with five rows of distant suckers on the angles ; tentacula ten ; dental apparatus very short.

D 213. The Brown Sea-Girkin, *Ocnus brunneus*, Forbes.

Fig. Forbes, Brit. Starfishes, p. 229.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

Family 2. *Thyonidæ*.

Genus THYONE, Oken.

Body nearly regular, covered with scattered papillose suckers ; tentacula ten ; teeth of the dental apparatus long and filiform.

D 214. The *Thyone fusus*, Müller.

Fig. Lam. Anim. sans Vert. p. 444. n. 5.

Hab. Coast of Normandy.

Prepared by Mr. H. Goadby.

Genus HOLOTHURIA, Linn.

Body lengthened, soft, nearly cylindrical, covered with scattered suckers; tentacles twenty; vent widely open.

D 215. Two specimens of the "Trepang," *Holothuria edulis*, Jaeger. They are in the condition in which they were offered for sale in the China market, in which country they are employed in the preparation of nutritious soups.

Fig. Wilkes, U.S. Expl. Exped. Anim. sans Vert. iii. p. 457.

Hab. Australian Seas.

Presented by R. T. Frere, Esq., M.D.

D 216. A series of specimens of *Holothuria* —, divided transversely, to show what portion of the body is coated with calcareous matter; one of them, marked A, exhibits a young *Holothuria* of the same species within its leathery tunic, which must have been swallowed during life.

Hab. Australian Seas.

Presented by R. T. Frere, Esq., M.D.

D 217. A specimen of *Holothuria* —. It has been dried, and now appears surrounded entirely with a coating of calcareous matter, which, on microscopic examination, will be found to be composed of short boat-like spicula.

Fig. Quekett, Lect. on Histology, vol. ii. p. 240.

Hab. Natal.

Presented by Capt. Sir E. Home, Bart., R.N.

D 218. A small Echinoderm, belonging to the genus *Holothuria*, but the specific name of which has not been decided on.

Fig. MS., Mus. Coll. Surg.

Hab. Locality unrecorded.

Prepared by Mr. H. Goadby.

C A T A L O G U E.

R E C E N T I N V E R T E B R A T A.

Subkingdom MOLLUSCA.

(HETEROGANGLIATA, Owen ; MALACAZOA, Blainville.)

THE MOLLUSCA are animals with soft bodies enveloped in an integument, which is either shell-less, or commonly protected by one or more calcareous plates,—comprising the univalve, bivalve, or multivalve shells. Their alimentary system is complete, and they are provided with a heart and respiratory organ. The nervous system consists of a medullary ring surrounding the œsophagus, and giving off nerves, sometimes unsymmetrically, to different parts of the body. The molluscan archetype has been considered to present two primary modifications, dependent on the direction of the flexure of the intestine in relation to the hæmal and neural parts of the mollusk. To the modifications of the neural plan belong the Cephalopoda, Pulmonifera, Pteropoda, Conchifera, Brachiopoda, and Bryozoa. The mollusks which present modifications of the hæmal plan are, the Nucleobranchiata, Prosobranchiata, Opisthobranchiata, and Nudibranchiata.

The Molluscan subkingdom has been divided by M.-Edwards into *Mollusca proper* and *Molluscoidea*, the former including the Cephalophora or Encephala, and Conchifera ; the latter division (*Molluscoidea*) including the Bryozoa and Tunicata, and to which has been added the Brachiopoda.

Subdivision MOLLUSCOIDEA.

Under this division are included the Bryozoa, Tunicata, and Brachiopoda.

Class I. BRYOZOA, Ehrenberg (POLYZOA, Thompson).

The Bryozoa include a group of composite animals, which, in their plan of structure, present a modification of the Molluscan type, and hence have been termed Molluscoidea. From their general habits and external features, they were formerly arranged with the Anthozoa and Hydraform polypes. In the conformation of the digestive apparatus, and in the presence of a nerve-ganglion between the buccal and anal orifices, the Bryozoa present strong affinities to the Ascidian Mollusks, from which, however, they differ in the absence of a vascular respiratory sac, in having a crown of radiating ciliate tentacles, and in the zooid quitting the ovum as a ciliated gemmule. In some other respects the Bryozoa are closely allied to the Brachiopoda. They are numerous and widely distributed, and have a great range in time, being found in the oldest sedimentary rocks, and distributed throughout all the fossiliferous strata.

The Bryozoa occur as variously aggregated groups of minute animals, occupying contiguous or organically united cells, thus constituting their multiform skeletons, which are flexible or hard, and are either branching, foliaceous, or encrusting.

The cell or chamber containing the polypide or soft portions of the Bryozoon, consists of an internal and external tunic: the former (endocyst) is soft, thin, membranaceous, transparent, and contractile; the latter (ectocyst) varies considerably in its appearance and composition in different genera, being either calcareous or corneo-calcareous, sometimes almost gelatinous and transparent, as in *Cristatella*, sometimes having the membrane strengthened by irregularly formed siliceous or earthy particles, as in most of the Bryozoa Phylactolæmata (Hippocrepia); in the *Pedicellina* the ectocyst consists of a highly organized transparent tunic.

The Bryozoa are divided into two sections, which are based upon the mouth being more or less completely surrounded by a single row of ciliated tentacles, which are arranged upon a disc or lophophore. In the Gymnolæmata, or

marine forms, the lophophore is nearly orbicular, continuous, and the mouth without an epistome; in the Phylactolæmata, or freshwater forms, the lophophore is produced into two arms, crescent-shaped, and the mouth with an epistome. The majority of the Bryozoa are fixed in their mature state, though some, as the *Cristatella*, are endowed with locomotion.

Order I. GYMNOLEÆMATA, Allman. (INFUNDIBULATA, Gervais.)

Tentacles arranged on a circular and continuous lophophore. No epistome.

a. Polypide completely retractile; evagination perfect.

Suborder I. CHEILOSTOMATA.

Aperture of cell crescentic, furnished with a moveable articulate lid or operculum.

Cells arising from each other, and from various parts of the cell.

The majority of forms belonging to the Cheilostomata are provided with two kinds of moveable organs or appendages to the cells,—*Vibracula*, or whip-like processes, consisting of long slender setæ; and *Avicularia*, or bird's-head processes, forming a kind of pincers, and which during life are in constant motion. Cells horny and flexible, or rigid and calcareous. All the forms are marine.

A. Articulata.

Polyzoary distinctly divided by flexible articulations.

a. Uniserialaria.

Cells disposed in a single series.

Family *Catenicellidæ*.

Cells connected by flexible joints.

Genus CATENICELLA, Blainville.

E 1. The *Catenicella ventricosa*.

Fig. Busk, Cat. of Marine Polyzoa, pls. 2 & 3.

Hab. Bass' Strait, in forty-five fathoms.

Presented by Prof. G. Busk, F.R.S.

B. Inarticulata.

Polyzoary continuous throughout.

a. Uniserialaria.

Cells disposed in a single series.

Family *Scrupariadæ*.

Genus *ÆTEA*, Lam. (*Anguinaria*, Lam.)

E 2. *Ætea dilatata*, Busk.

Fig. Busk, Ann. Nat. Hist. 2 ser. viii. tab. 9. fig. 14.

Hab. New Zealand.

Presented by B. Tucker, Esq.

E 3. The Snake's-head Coralline of Ellis, *Ætea anguina*, Linn. sp. (*Anguinaria spatulata*, Lam.).

Fig. Johnst. Brit. Zooph. tab. 50. figs. 7, 8.

Hab. The Mediterranean. This species is widely distributed in the seas of Europe, and the Atlantic and Antarctic oceans.

"From very small holes in the broadest part of this irregular-winding tube there arise here and there small testaceous white hollow figures, exactly resembling a Snake without the lower jaw, in the place whereof is the entrance into the cells."—Ellis, Corallines, p. 43. *Hunterian.*

Genus *BEANIA*, Johnston.

E 4. *Beania mirabilis*, Johnston.

Fig. Johnst. Brit. Zooph. p. 377. figs. 69, 70.

Hab. Scarborough.

Presented by W. Bean, Esq.

b. Bi-multiserialaria.

Cells disposed in a double or multiple series.

Family *Salicornariadæ*.

Cells disposed around an imaginary axis, branches cylindrical, dichotomous ; polyzoary erect.

Genus SALICORNARIA, Cuvier.

- E 5. *Salicornaria farciminoïdes*, Ellis and Sol. sp.

Fig. Johnst. Brit. Zooph. tab. 66. figs. 6, 7.

Hab. Plymouth, in forty fathoms. *Presented by T. H. Stewart, Esq.*

Family Cellulariadae.

Genus MENIPŒA, Lam. (*Cellularia*, Pallas, pars.)

- E 6. *Menipœa ternata* (*Cellularia*), Ellis and Sol. sp.

Fig. Johnst. Brit. Zooph. tab. 59.

Hab. Scarborough. *Presented by W. Bean, Esq.*

- E 7. *Menipœa cirrata*, Ellis and Sol. sp.

Fig. Lamx. Exp. Méth. vii. tab. 4. fig. D.

Hab. Southern Seas. *Presented by Capt. Sir E. Home, Bart.*

Genus SCRUPOCELLARIA, Van Beneden.

- E 8. *Scrupocellaria scruposa*, Linn. sp. (*Cellularia*, Johnst.)

Fig. Johnst. Brit. Zooph. 336. tab. 58. figs. 5, 6.

Hab. Whitby. *Presented by Prof. Busk, F.R.S.*

Genus CABEREA, Lamx.

- E 9. *Caberea Boryi*, Busk. Attached to a valve of *Hinnites*.

Fig. Busk, Cat. Marine Polyzoa, p. 38.

Hab. This species is widely distributed, occurring in the north, temperate, and Australian Seas. *Hunterian.*

Genus CELLULARIA, Pallas.

- E 10. *Cellularia ornata*, Busk.

Fig. Cat. Marine Polyzoa, p. 20.

Hab. Australian Seas. *Presented by John Quekett.*

Family *Bicellariadæ*.Genus *BUGULA*, Oken. (*Bicellaria*, Blainv.)

- E 11. *Bugula avicularia* (*Cellularia*), Pallas, sp.
Fig. Johnst. Brit. Zooph. 292. tab. 36. figs. 7, 8.
Hab. Scarborough. Presented by W. Bean, Esq.
- E 12. *Bugula dentata* (*Acamarchis*), Lamx. sp.
Fig. Lamx. Exp. Méth. tab. 5. figs. 1-3.
Hab. South Africa. Presented by Prof. Busk, F.R.S.
- E 13. *Bugula flabellata*, Thomps. sp. (*Flustra avicularis*, Johnst.).
Fig. Johnst. Brit. Zooph. 346. tab. 63. figs. 3, 4.
Hab. South-west coast of Britain. Presented by Prof. Busk, F.R.S.
- E 14. *Bugula Murrayana* (*Flustra*), Bean, sp.
Fig. Johnst. Brit. Zooph. tab. 63. figs. 5, 6.
Hab. Scarborough. Presented by W. Bean, Esq.
- E 15. *Bugula plumosa* (*Cellularia*), Pallas, sp.
Fig. Johnst. Brit. Zooph. 341. tab. 61. figs. 1-5.
Hab. Britain. Prepared by Mr. H. Goadby.
- E 16. The Snail-bearing Coralline of Ellis, *Bugula neritina* (*Cellularia*), Linn. sp.
Fig. Johnst. Brit. Zooph. 340. tab. 60. figs. 3, 4. Ellis, Corallines,
pl. 19.
Hab. Britain. America.
"These polypes turning into testaceous bodies, opened a new scene of wonder to me. But the minuteness of these shelly figures would have been passed over without any further notice, if it had not been for a present I received from my worthy and ingenious friend, Mr. Peter Collinson, F.R.S., of a specimen of this class of Corallines, which he had sent

him from America. Examining this carefully with the microscope, I plainly discovered it to be the connected nidus's or matrix's of certain testaceous animals, like small snails or *Neritæ*; an account I have had the honour to lay before the Royal Society in March 1753.

"That these little snails are perfect animals, nobody will doubt who has thoroughly examined them, and that the ultimate end of this curious branched Coralline was made subservient to the purpose of introducing these little creatures into life: but, suppose it is asked, How do these go on to produce their kind? This, indeed, will be difficult to answer, unless we may by analogy suppose that these minute shell-fish grow large, and become capable of spawning the whole Coralline, in the same manner as the *Buccinum* of New York does its curious matrices, which are like long bunches of hops.

"Or, let us suppose that the testaceous animal now in its utmost perfection lays its eggs, these turn into vermicular-shaped polypes, which, after they have fixed themselves to some marine substance, rise up and push forth into branches of small polypes in their cells in a double row, alternately placed in respect to one another, each having its proper cell, which is divided from the other by very thin partitions, and each little polype is secured by an umbilical ligament.

"From this state, then, of being small polypes, we have observed that they change into testaceous animals connected to their cells by the umbilical ligament till they are capable of providing for themselves."—
Ellis, *Corallines*, p. 37. *Hunterian.*

Family *Gemellariadæ*.

Cells opposite, in pairs; polyzoary continuous.

Genus GEMELLARIA, Savigny.

E 17. *Gemellaria loriculata*, Linn. sp.

Fig. Johnst. Brit. Zooph. 293. tab. 47. figs. 12, 13.

Hab. Dover.

Presented by Prof. Busk, F.R.S.

Genus NOTAMIA, Flem.

- E 18. *Notamia bursaria*, Linn. sp.

Fig. Johnst. Brit. Zooph. p. 294. tab. 51. figs. 1, 2.

Hab. British Seas. Walton-on-the-Naze. Presented by John Quekett.

Family *Flustradæ*.

Genus FLUSTRA, Lam.

- E 19. The Broad-leaved Sea Matt of Ellis, *Flustra foliacea*, Linn.

Fig. Johnst. Brit. Zooph. p. 342. tab. 62. figs. 1, 2.

Hab. Plymouth. Presented by T. H. Stewart, Esq.

- E 20. *Flustra papyracea*, Ellis and Sol. sp. (*Flustra chartacea*, Johnst.).

Fig. Johnst. Brit. Zooph. p. 343. tab. 60. figs. 5, 6.

Hab. Dartmouth.

A dried specimen from Mr. Ellis's collection, and one preserved in fluid. Hunterian.

- E 21. A group of the Basket-work Sea Matt of Ellis, *Flustra verticillata*, Esper. (*Electra verticillata*, Lamx.).

Fig. Ellis, Zooph. p. 15. tab. 4. fig. a.

Hab. Port Natal. Seas of Europe. Presented by John Quekett.

Genus CARBASEA, Gray.

- E 22. *Carbasea papyrea*, Pallas, sp. (*Flustra carbacea*, Johnst.).

Fig. Johnst. Brit. Zooph. tab. 62. figs. 1, 2.

Hab. Plymouth. Presented by T. H. Stewart, Esq.

- E 23. A specimen in fluid, showing the polyzoons *in situ*.

Hab. Frith of Forth. Purchased.

Family *Membraniporidæ*.

Genus MEMBRANIPORA, Johnston.

- E 24. *Membranipora pilosa*, Pallas, sp.

Fig. Johnst. Brit. Zooph. p. 280. tab. 34. figs. 10-12.

Hab. European Seas. Very common on *Laminaria* and other seaweeds. Presented by John Quekett.

- E 25. A mass of slaty rock, partly encrusted with *Membranipora magnilabris*, Busk ; and also having a group of *Serpulæ* attached to it.
Fig. Busk, Cat. Mar. Polyzoa, p. 62. pl. 65. fig. 4.
Hab. Auckland Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family *Celleporidæ*.

Genus *CELLEPORA*, Linn.

- E 26. Three specimens of *Cellepora pumicosa*, Linn.
Fig. Johnst. Brit. Zooph. p. 295. tab. 52. figs. 1-3.
Hab. British Seas. *Presented by T. H. Stewart, Esq.*

Family *Escharidæ*.

Genus *ESCHARA*, Ray.

Polyzoarium foliaceous, branched ; cells on both sides.

- E 27. A series of specimens of *Eschara foliacea*, Lam., showing the union and mode of growth of this form.
One or two species of *Serpulæ* are adherent to the specimens.
Fig. Johnst. Brit. Zooph. p. 351. tab. 67.
Hab. Plymouth. Brighton. *Presented by John Quekett.*

Genus *RETEPORA*, Lam.

Polyzoarium foliaceous, reticulated ; cells on one side only.

- E 28. A series of specimens of the Net Coralline of Ellis, *Retepora cellulosa*, Lamx.
Fig. Ellis, Zooph. tab. 26.
Hab. Mediterranean. Australian Seas. *Presented by John Quekett.*
- E 29. *Retepora Beaniana*, King.
Fig. Ann. Nat. Hist. xviii. p. 237.
Hab. Shetland Islands. Coast of Northumberland, in deep water.
Hunterian.

Suborder II. CYCLOSTOMATA.

Aperture terminal, without any moveable appendage or lid; cells tubular, calcareous, immersed or exserted, arising from each other either singly or in pairs. All the forms are marine.

Family *Tubuliporidae*.

Genus TUBULIPORA, Lam.

E 30. *Tubulipora patina*, Lam.

Fig. Johnst. Brit. Zooph. tab. 46. figs. 1-3.

Hab. Plymouth.

Presented by T. H. Stewart, Esq.

Suborder III. CTENOSTOMATA.

Aperture terminal or subterminal, contractile, surrounded by a circle of setæ or toothed horny sheath, which serves as an operculum in the retracted state; cells arising from a tube common to several cells; tube divided or not into distinct internodes.

Family *Vesiculariadae*, Johnston.

Cells tubular, separate, arising from a common base; mouth terminal.

Genus SERIALARIA, Lam.

E 31. *Serialaria lendigera*, Johnst.

Fig. Johnst. Brit. Zooph. p. 368.

Hab. Scarborough.

Presented by W. Bean, Esq.

Genus BOWERBANKIA, Farre.

E 32. *Bowerbankia imbricata*, Adams (*Bowerbankia densa*, Farre).

Fig. Farre, Phil. Trans. 1837, p. 391.

Hab. Tenby.

Presented by Prof. Busk, F.R.S.

b. Polypide retractile ; evagination imperfect.

Family *Paludicellidæ*.

Genus *PALUDICELLA*, Gervais.

E 33. The *Paludicella Ehrenbergi*, Van Beneden.

Fig. Allman, Freshwater Polyzoa, p. 113. pl. 10.

Hab. Regent's Canal, London.

Presented by John Quekett.

c. Polypide partially retractile.

Family *Urnatellidæ*.

One species is known at present, and is described by Dr. Leidy, Proc. Acad. Nat. Sc. of Philad. vii. p. 191 : see also Allman's Freshwater Polyzoa, p. 117.

Order II. PHYLACTOLÆMATA, Allman. (*HIPPOCREPIA*, Gervais.)

Tentacles arranged on a crescentic or bilateral lophophore ; mouth with an epistome. Exsertion of endocyst partial.

Suborder LOPHOPHEA.

Arms of lophophore free or obsolete.

Family *Plumatellidæ*.

Cœnœcium rooted.

Genus *ALCYONELLA*, Lam.

E 34. A longitudinal section of the *Alcyonella stagnorum*, Lam. (*Alcyonella fungosa*, Allm.).

Fig. Allman, Mon. Freshwater Polyzoa, 1856, p. 87.

Hab. Attached to stones, &c., in stagnant and slowly-running waters.

Prepared by Mr. H. Goadby.

Family *Pedicellinidæ*.

Tentacles confined to the outer margin of the bilateral lophophore, and united at their base by a membrane into a muscular calyx.

The species are marine, and the genus *Pedicellina* is not represented in the Collection.

Class II. TUNICATA, Lamarck.

(ACEPHALOPHORA HETEROBRANCHIATA, Blainv.

ACÉPHALES SANS COQUILLES, Cuvier.

SOFT-SHELLED MOLLUSKS, Hunter.)

The Tunicata are unsymmetrical molluscous animals of somewhat lower organization than the Mollusca generally. They constitute the group of soft-shelled Mollusks of Hunter, and the shell-less Mollusca of Cuvier. The soft parts, consisting mainly of stomach, intestine, liver, and ovarial apparatus, are associated with a great branchial sac, and the whole enveloped in a coriaceous integument or tunic—whence their name Tunicata. The outer covering, which represents the calcareous shell of the other acephalous Mollusks (as fully recognized by Hunter*), is either bag-shaped and provided with two apertures, or tube-shaped and open at the end; this envelope is flexible, occasionally strengthened with calcareous plates, and not unfrequently permeated by calcareous spicula, the latter being more especially the case in the Compound Ascidiæ: in some Salpæ, siliceous concretions have been observed.

The presence of cellulose in the soft test of Tunicates is an interesting fact in their natural history; the following has been estimated by M. Payen to be the chemical composition of the Ascidian tunic: cellulose, 60·34; azotized substance, 27·00; inorganic matter, 12·66.

The Tunicata are exclusively marine and widely distributed, from the Arctic to the Tropical Seas, and occur both fixed in the more shallow zones, and floating in the open seas, as the Salpæ.

The soft nature of their integument may account for their not having been found in a fossil state. Some fossil forms (*Leucophthalmus*, König, *Saconites*, Rafin.) have been referred to the Tunicata, but they are found to belong to the Cystideæ, which are closely allied to the crinoidean family of the Echinodermata.

The families of the Tunicata are divided into Simple Ascidiæ (*Ascidia*),

* See Catalogue of Physiological Series, vol. i. p. 266.

the Social Ascidians (*Clavellinidæ*), the Compound Ascidians (*Botryllidæ*), the compound floating forms (*Pyrosomidæ*), and the *Salpidæ*, which are free, and are alternately solitary and aggregated.

Some species of *Ascidia* are much esteemed as an article of food in France, Brazil, China, and the Mediterranean: "At Cette, *Ascidia* are taken regularly to market; and the *Cynthia microscopus*, although so repulsive externally, furnishes a very delicate morsel much sought after."—Van Beneden.

A. DICHITONIDÆ, Fleming; *Saccobranchiata*, Owen.

Inner sac or mantle more or less detached from the external tunic, united at the orifices; branchiæ large, with a tentacular orifice.

Family *Asciadiadæ*, Forbes.

Animal simple, fixed; isolated or gregarious; oviparous.

Genus ASCIDIA, Baster.

E 35. The *Ascidia intestinalis*, Linn.

Fig. Forbes, Brit. Mollusca, vol. i. p. 31.

Hab. Coast of Britain.

Hunterian.

E 36. The *Boltenia reniformis*.

Fig. Quekett, Lectures on Histology, ii. p. 264.

Hab. Pacific Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Clavellinidæ*, Forbes.

Animal small, compound, fixed; connected by creeping tubular prolongations of the common tunic.

Genus CLAVELLINA, Savigny.

E 37. The *Clavellina lepadiformis*, Müller, sp.

Fig. Forbes, Brit. Mollusca, vol. i. p. 26.

Hab. Britain.

Family *Botryllidæ*, MacLeay.

Animals compound, fixed ; their tunics fused together, forming a mass in which the animals are imbedded in one or more groups ; oviparous and gemmiparous.

Genus *BOTRYLLUS*, Gaertner.

E 38. Three specimens of *Botryllus*.

Hab. Great Britain.

Prepared by Mr. H. Goadby.

E 39. A series of specimens of a small Compound Tunicated animal found abundantly on coral reefs ; each contains a large amount of calcareous spicula.

Fig. Quekett, Lectures on Histology, vol. ii. p. 266.

Hab. Pacific. China Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *APLIDIUM*, Savigny.

E 40. A species of *Aplidium*.

Hab. Britain.

Prepared by Mr. H. Goadby.

Family *Pyrosomidæ*.

Animal compound, free, floating, phosphorescent ; branchial and anal orifices opposite to each other.

Delicate and transparent forms, and very abundant, inhabiting the Mediterranean and warmer parts of the ocean, and emitting a bright phosphorescent light. This family forms a connecting link between the *Asciadiadæ* and *Salpidæ*.

Genus *PYROSOMA*, Péron.

E 41. A species of *Pyrosoma*.

Hab. Atlantic Ocean.

Prepared by Mr. H. Goadby.

B. MONOCHITONIDÆ, Fleming ; *Tæniobranchiata*, Owen.

Inner sac or mantle adhering throughout to the tunic ; orifices without tentacles.

Family *Salpidæ*, Forbes.

Animals free, floating ; alternately solitary and aggregated ; orifices opposite to each other. Sexes distinct.

Genus *SALPA*, Forskäl.

These animals occur under two distinct conditions, being at one time solitary, and at another aggregated.

“The aggregate Salpians quit their gemmiparous parent associated together in long chains. After floating a certain time, each individual, as Dr. Chamisso first discovered, propagates a young one like itself. The solitary Salpa propagated by each individual of the chain is the product of an impregnated ovum, and is for a time suspended by a peduncle from the dorsal wall of the visceral cavity of the parent. When liberated, the solitary Salpa grows to the size of the grand-parent, and then brings forth a social chain of young Salpæ, which, by the exercise of their uniparous generation, again give origin to the solitary and multiparous individuals. Thus, observes Chamisso, only the alternate generations resemble each other.”—Owen, *Lect. Comp. Anat.* p. 484.

The Salpa-chains, varying in length from a few inches to many feet, swim through the water with a regular serpentine movement. The Salpians occur occasionally in the North Seas, and are abundant in the Mediterranean and warmer parts of the ocean.

E 42. The *Salpa polycratica*, Forskäl.

Fig. Ægypt. *Descr. Animal.* p. 116. pl. 36 F.

Hab. Egypt.

E 43. Eggs of a species of *Salpa*.

Prepared by Mr. H. Goadby.

Class III. BRACHIOPODA, Cuvier.

(PALLIOBRANCHIATA, Blainv.)

The Palliobranchs, or Brachiopoda, as they are usually termed, are bivalve shell-fish, which by their organization connect the Bryozoa and Tunicata on the one hand, and the Acephalous Mollusks on the other. They differ from the latter in the arrangement of the soft parts of the animal, which is equal-sided, and also in the peculiar structure of the shelly tissue. They are inequivalve, and were called "Lamp-shells" by the old Naturalists, from the apparent resemblance of the orifice which serves as a passage for the pedicle of attachment, to the hole through which the wick protruded in the ancient form of lamp. The dorsal valve is usually the smallest, and the ventral valve the largest; the latter generally having a prominent beak, by which it is attached, as in *Thecidium* and *Crania*, or a perforation through which the organ of attachment passes, as in *Terebratula*. The Brachiopoda are widely distributed in space, being found both in the polar and tropical seas; they range from shallow water to the greatest depths, but are mostly found in the deep sea. The Brachiopods are as equally distributed in time, being found throughout all the sedimentary deposits, from the oldest to the most recent. About seventy recent species are known, and more than 1000 fossil species have been described, of which the greater number were found in British strata.

The genera which occur only as fossil forms, are *Stringocephalus* of the Terebratulidæ; *Spirifer*, *Suessia*, *Athyris*, *Retzia*, *Uncites* of the Spiriferidæ; *Pentamerus*, *Camerophoria*, and *Atrypa* of the Rhynchonellidæ; *Orthis*, *Orthisina*, *Strophomena*, *Davidsonia*, *Calceola* of the Orthidæ; *Producta*, *Aulosteges*, *Strophalosia*, *Chonetes* of the Productidæ; *Zellania*, *Kingia*, *Meganteris* of the Terebratulidæ; *Trematis*, *Siphonotreta* of the Discinidæ; *Obolus* of the Lingulidæ.

The genera which occur both recent and fossil, are *Terebratula*, *Terebratulina*, *Waldheimia*, *Terebratella*, *Magas*, *Lyra*, *Morrisia*, *Argiope*, *Thecidium* of the Terebratulidæ; *Rhynchonella* of the Rhynchonellidæ; *Crania* of the Craniadæ; *Discina* of the Discinidæ; *Lingula* of the Lingulidæ.

The genera which are recorded as recent forms only, are *Bouchardia*, *Kraussia*, *Megerlia* of the Terebratulidæ.

A. Valves articulated ; shell calcareous.

Family *Terebratulidæ*.

Shell punctate, round or oval, smooth or striated ; ventral valve the largest, with a produced beak, generally truncated by the foramen, and two curved cardinal teeth ; dorsal valve either with a simple or complex shelly loop attached to the hinge-plate, or lobed, and more or less confluent with the valve ; pedunculate or attached by the ventral valve.

Genus *TEREBRATULA*, Lhwyl.

Shell smooth ; beak truncate and perforate ; foramen circular ; deltidium of two pieces ; loop very short, simple, not reflected.

About 100 fossil species are recorded, ranging from the Middle Palæozoic to the Newer Tertiary strata. Of this type there is one recent species living in the Mediterranean from 90 to 250 fathoms.

E 44. The *Terebratula vitrea*, Lam.

Fig. Encycl. Méth. pl. 239. fig. 1.

Hab. Mediterranean Sea.

This specimen is partly covered by attached portions of *Galeolaria*, and a species of *Retepora*. *Hunterian.*

Genus *WALDHEIMIA*, King.

Shell smooth or plaited ; foramen complete ; loop elongate, reflected.

The fossil species are chiefly found in the Jurassic and Cretaceous period. The nine recent species are distributed in the North Sea and Indian and Pacific Oceans, ranging in depth from low water to 100 fathoms.

E 45. The *Waldheimia australis*, Quoy, sp.

Fig. Quoy et Gaim. Voy. de l'Astrolabe, pl. 85. figs. 1-5.

Hab. Port Jackson, living in very shallow water.

"A shell called the 'Coach-spring Shell,' found in strings in the sands at the Domain, Port Jackson, New South Wales" (1844).

One specimen of the closed shell, the other separated, showing the internal apophysary system attached to the dorsal valve.

Presented by Capt. Sir E. Home, Bart., R.N.

E 46. The *Waldheimia lenticularis*, Desh. sp.

Fig. Mag. de Zoologie, 1841, pl. 41.

Hab. New Zealand.

The closed specimen shows the loop, the two venous trunks in the dorsal, and the four in the ventral valve, with their ramifications. The single dorsal valve exhibits the cardinal process, the dental sockets, hinge-plate, septum, crura of loop, and adductor impressions.

Presented by John Quekett.

Genus *TEREBRATULINA*, D'Orb.

Shell striated, auriculate; deltidium rudimental; foramen incomplete; loop short, annular.

The recent species live in the North Sea (depth from 10 to 120 fathoms).

The fossil species occur in the secondary and tertiary strata.

E 47. *Terebratulina caput-serpentis*, Lam. sp.

The specimen attached by its pedicle to a fragment of shell.

Fig. G. B. Sowerby, Thesaur. Conch. pl. 68. figs. 1-4.

Hab. Loch Fyne, west coast of Scotland (40 fathoms).

Presented by Mrs. Buckland.

Genus *TEREBRATELLA*, D'Orb.

Shell smooth or plaited; dorsal valve impressed; foramen large; loop doubly attached and reflected.

E 48. The *Terebratella dorsata*, Lam.

Fig. Encycl. Méth. pl. 242. fig. 4.

Hab. Straits of Magellan.

Presented by John Quekett.

E 49. The *Terebratella rubicunda*.

Fig. Quoy, Voy. de l'Astrolabe, pl. 85. figs. 7, 8.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 50. The *Terebratella recurva*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 85. figs. 11, 12.

Hab. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Craniadæ*.

Shell hingeless, calcareous, punctate, attached by the ventral valve.

Genus CRANIA, Retzius (*Criopus*, Poli ; *Orbicula*, Cuvier).

Shell smooth or striate ; ventral valve attached, dorsal valve patelliform, internal border of each valve granulated ; a small median brachial process.

About thirty fossil species, ranging from the Lower Silurian strata upwards : the five recent species are distributed in the North Sea, Mediterranean, Indian, and Australian Seas.

E 51. The *Crania anomala*, Müller, sp. (*Orbicula Norvegica*, Lam. ; *Crania Norvegica*, G. B. Sow.)

Fig. Thesaur. Conch. pl. 73. figs. 15-17.

Hab. West coast of Scotland.

Presented by John Morris, F.G.S.

This species is gregarious on rocks and stones in deep water, living from 40 to 90 fathoms in the North Sea and Mediterranean.

Family *Rhynchonellidæ*.

Shell not punctate, fibrous ; valves articulated, no cardinal area ; ventral valve with a prominent incurved beak, the foramen beneath it ; hinge-teeth supported by dental plates ; dorsal valve with a deeply divided hinge-plate, supporting two short brachial processes, not united.

Genus RHYNCHONELLA, Fischer.

Shell trigonal, plaited ; beak acute, incurved ; foramen beneath, usually completed by a deltidium.

This genus includes 250 or more fossil species, which are distributed through all the sedimentary strata, from the Lower Palæozoic to the Tertiary series inclusive. The recent species at present known are only two, one (*R. psittacea*) living in the North Sea, on the coasts of Labrador, Hudson's Bay, Melville Island, &c. (100 fathoms), the other (*R. nigricans*) in the Southern Ocean, coasts of New Zealand (19 fathoms).

E 52. The *Rhynchonella psittacea*, Gmel.

Fig. Encycl. Méth. pl. 244. fig. 3.

Hab. Coast of Labrador, Newfoundland.

Purchased.

B. Valves not articulated ; shell horny or calcareous.

Family *Lingulidæ*.

Shell hingeless, horny, subequivalve, attached to submarine bodies by a hollow pedicle passing out between the cardinal end of the valves.

Genus LINGULA, Bruguière.

Shell oblong, gaping at each end, truncate anteriorly, obtusely pointed posteriorly ; pedicle long and contractile. No internal calcareous support.

Lingula is one of the oldest forms of organic life, commencing in the lowest fossiliferous rocks, and ranging through all the marine sedimentary strata ; between thirty and forty fossil species are known. The few (seven) recent species occur in the Indian and Pacific Oceans ; they inhabit moderate depths, and are even found half buried in the sand of the shore.

E 53. The *Lingula anatina*, Lam., with the pedicle of attachment.

Fig. Encycl. Méth. pl. 250. fig. 1.

Hab. The Indian Ocean.

Presented by John Quekett.

Family *Discinidæ*.

Shell hingeless, inequivalve, attached by a pedicle passing through a perforation in the ventral valve. No internal calcareous support.

Genus DISCINA, Lam. (*Orbicula*, Sow., not Cuvier.)

Shell horny, lamellose ; dorsal valve patelliform, ventral valve flat or conical, perforated.

About thirty fossil species are recorded, chiefly ranging from the Silurian strata to the present time. The seven recent species are distributed in the tropical seas.

E 54. The *Discina lamellosa* (*Orbicula*, sp.), Brod.

Fig. Brod. Zool. Proc. 1833, p. 124. Thes. Conch. pl. 73.

Hab. Coast of Peru.

Purchased.

Subdivision MOLLUSCA PROPER.

Class IV. LAMELLIBRANCHIATA, Blainv.

(CONCHIFERA, Lam.)

The molluscous animals of this class are provided with bivalve shells, connected by a hinge and ligament, the two valves covering respectively the right and left side of the animal. The mantle is bilobed, and more or less open ventrally. Sexes distinct. The pallial line uniting the adductor muscles is either simple (*Integropallialia*) or sinuous (*Sinupallialia*).

ASIPHONIDA.

The animals of this division are not provided with respiratory siphons; the lobes of the mantle are free, or united by a small portion only; the pallial impression is simple.

INTEGROPALLIALIA. Pallial line simple.

Family *Ostreidæ*.

Inequivalve, somewhat inequilateral shells, either free or adherent by one valve; the ligament internal, and the hinge usually without teeth; the adductor muscle single and subcentral.

Genus OSTREA, Linn.

E 55. Three specimens of *Ostrea Virginica*, Gmelin.

Fig. Encycl. Méthod. pl. 179. figs. 1-5.

Hab. Coast of Virginia.

Hunterian.

E 56. The Common Oyster, *Ostrea edulis*, Linn., in different stages of growth.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 307. pl. 54.

Hab. British coasts.

Hunterian.

E 57. A series of specimens of the *Ostrea hyotis*, Chemn. A plicated species; the ridges produced into tubiferous lamellæ.

Fig. Encycl. Méthod. pl. 186. fig. 1.

Hab. Indian Ocean.

Hunterian.

- E 58. The *Ostrea folium*, Linn.
Fig. Encycl. Méthod. pl. 184. figs. 10, 14.
Hab. Indian Ocean. Presented by Mr. Sawell, M.R.C.S.
- E 59. A branched species of *Gorgonia*, to which are attached specimens of the convex valve of *Ostrea folium*, Linn.
Hab. Locality unrecorded. Hunterian.
- E 60. A long stem of a species of *Antipathes*, to which are attached some valves of the *Ostrea folium*, Linn.
Hab. Indian Ocean. Presented by Cæsar H. Hawkins, Esq., F.R.S.
- E 61. A group of the *Ostrea parasitica*, Gmel., attached to a branch of a tree.
Fig. Lam. An. sans Vert. vol. vii. p. 224.
Hab. West Indies. Presented by J. P. Vincent, Esq., F.R.C.S.E.
- E 62. A variety of the Cockscomb Oyster, allied to *Ostrea crista-galli*.
Hab. West Indies. Hunterian.

Genus ANOMIA, Linn.

The *Anomiæ* are translucent suborbicular shells, but variable in form, and are attached to various submarine bodies by a short muscle or plug passing through a notch or hole in the smaller or right valve, their external markings and shape being generally dependent on the form of the surface to which they are attached.

The *Anomiæ* range from low-water to 100 fathoms, and are found in the Black Sea, Northern Seas, and those of India, Australia, and Western America.

- E 63. A series of specimens and varieties of *Anomia ephippium*, Linn., showing the perforation of the smaller valve and the plug to which the muscle is attached.
Fig. Forbes and Hanley, Brit. Moll. ii. p. 325.
Hab. British Seas. Purchased.
- E 64. The valves of *Anomia ephippium*, Linn., showing the muscular impressions,

ligament, and sinus. Right valve:—*l*, ligamental process; *s*, sinus for byssal muscle; *a*, adductor muscle. Left valve:—*l*, ligamental pit; *a*, retractor muscle; *p*, byssal muscle; *p'*, retractor; *a'*, adductor.

E 65. The *Anomia enigmatica*, Lam.

Fig. Reeve, Conch. Icon. pl. 8. figs. 37–40.

Hab. Philippine Islands.

Purchased.

Genus PECTEN, Bruguière.

E 66. Two specimens of *Pecten maximus*, Linn., to three of which *Ostrea* and *Serpula* are attached, and one partly uncoated and containing two shelly concretions.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 296.

Hab. British and Mediterranean Seas.

Hunterian.

E 67. Specimens and varieties of *Pecten opercularis*, Linn. sp.

Fig. Brit. Moll. ii. p. 299.

Hab. Seas of Britain and Europe.

Presented by Mr. J. Rowse.

E 68. Specimens of *Pecten varius*, Linn. sp.

Fig. Brit. Moll. ii. p. 273. pl. 50. fig. 1.

Hab. English Channel and seas of Europe.

Purchased.

E 69. Three specimens of *Pecten pusio*, Linn. (*Hinnites*.)

Fig. Brit. Moll. ii. p. 278.

Hab. Plymouth. Mediterranean.

Presented by Mr. J. Rowse.

E 70. Three specimens of *Pecten similis*, Laskey.

Fig. Brit. Moll. ii. p. 279.

Hab. Fowey.

Presented by Mr. J. Rowse.

E 71. The *Pecten pallium*, Linn. sp.

Fig. Reeve, Conch. Icon. pl. 17. fig. 63. *Encycl. Méth.* pl. 210.

Hab. Pacific and Eastern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 72. The *Pecten Jacobæus*, Linn. sp.
Fig. Encycl. Méth. pl. 209. fig. 2.
Hab. Mediterranean. *Hunterian.*
- E 73. The *Pecten cruentatus*, Reeve.
Fig. Reeve, Conch. Icon. pl. 19.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 74. The *Pecten filiosus*, Reeve.
Fig. Reeve, Conch. Icon. pl. 11.
Hab. Australia. *Hunterian.*

Genus PLACUNA, Solander.

The *Placunæ* are compressed translucent shells closely allied to the *Anomiæ*.

About four species are known, distributed in the Indian, Australian, and Chinese Seas.

- E 75. The *Placuna placenta*, Linn.
Fig. Encycl. Méth. pl. 173. figs. 1, 2.
Hab. North Australia. *Hunterian.*

Genus LIMA, Brug.

The *Limæ* are equivalve, somewhat compressed shells, either smooth, striated, or radiately ribbed. They are free, adherent by one valve, or attached by a byssus; ligament internal. The species are widely distributed, and range from 1 to 150 fathoms. The fossil species are the most numerous.

- E 76. The *Lima squamosa*, Lam.
Fig. Encycl. Méth. pl. 206. fig. 4.
Hab. China. *Hunterian.*
- E 77. The *Lima hians*, Gmelin.
Fig. Forbes and Hanley, Brit. Moll. ii. p. 268.
Hab. Britain. It occurs at various depths. *Presented by John Quekett.*

E 78. The *Lima bullata*, Sow.

Fig. Sowerby, Genera of Shells, No. 17.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus SPONDYLUS, Linn.

The *Spondylus* is an attached, inequivalve and irregular shell, radiately ridged and variously ornamented with spines; umbones separated by a large and flat area; the hinge consisting of two strong teeth in each valve, separated by the ligamental pit; muscular impression sublateral. The *Spondyli* are remarkable for their peculiar form and colouring, the irregular growth varying according to position. They are chiefly tropical shells, one species occurring in the Mediterranean, the others in the Indian and Pacific Oceans.

E 79. Two specimens of *Spondylus gaderopus*, Linn.

Fig. Reeve, Conch. Icon. pl. 3. fig. 13.

Hab. Mediterranean.

Purchased.

E 80. Two specimens of *Spondylus regius*, Linn., much worn, the spines abraded, and the valves perforated by parasitic animals.

Fig. Encycl. Méth. pl. 193. fig. 1.

Hab. Sooloo Islands.

Presented by Lord Valentia.

E 81. Different specimens of *Spondylus varians*, Sow., in various conditions of growth.

A bisected specimen of the same species shows a series of laminæ in the lower or attached valve deposited one above the other; in these interspaces water is frequently enclosed, from which circumstance it has been called the Water-Spondylus.

Hab. Pacific Islands.

Presented by Mr. J. T. Norman.

E 82. The *Spondylus costatus*, Lam.

Fig. Anim. sans Vert. vol. vii. p. 186.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 83. The *Spondylus Americanus*, Lam.*Fig.* Anim. sans Vert. vol. vii. p. 185.*Hab.* St. Domingo. *Presented by Capt. Sir E. Home, Bart., R.N.*E 84. The *Spondylus zonalis*, Lam.*Fig.* Anim. sans Vert. vol. vii. p. 191.*Hab.* Feejee Islands, and coast of Australia.*Presented by Capt. Sir E. Home, Bart., R.N.*

Genus PEDUM, Brug.

Shell compressed, elongate ; hinge-area larger ; ligamental pit produced interiorly ; shell attached by a byssus passing through a large notch in one valve.

E 85. The *Pedum spondyloideum*, Gmelin.*Fig.* Voyage de l'Astrolabe, pl. 76. figs. 15-21.*Hab.* Red Sea.*Purchased.*

Genus PLICATULA, Lam.

Irregular, costated, or smooth shells, with an internal ligament, and attached by the umbone of the right valve.

The species are found in the West Indies, America, Australia, Philippines, and India. The fossil forms occur in the Secondary and Tertiary deposits.

E 86. The *Plicatula Philippinarum*, Reeve.*Fig.* Conch. Icon. t. 90. fig. 13.*Hab.* Philippine Islands.*Hunterian.*

Family AVICULIDÆ. Winged Shells.

Inequivalve, oblique shells, attached by a byssus ; hinge generally without teeth, and the ligament separated and contained in one or more pits.

The Winged Shells chiefly inhabit the temperate and tropical seas. The

Meleagrina, or "Pearl Oyster," belongs to this family. The fossil genera *Posidonomya*, *Gervillia*, *Inoceramus*, *Pterinea*, *Trichites*, belong to the *Aviculidæ*.

Genus *AVICULA*, Brug.

The *Aviculæ* are abundant in the tropical and subtropical seas, and one species is common to the British and Mediterranean Seas (*A. Tarentina*), but rare in the former; they also occur on the coast of Mexico, and in the Indian and Pacific Oceans, ranging to about 20 fathoms in depth. The fossil species occur from the Lower Palæozoic to the Upper Tertiary strata.

E 87. The *Avicula Tarentina*, Lam.

Fig. Encycl. Méth. pl. 177. fig. 8.

Hab. Mediterranean.

Presented by Mrs. Robinson.

E 88. Three specimens of *Avicula lata*, Gray, attached to a branch of a *Gorgonia*.

Fig. Conch. Icon. t. 4. fig. 5.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 89. The *Avicula scalpta*, Reeve. A thin, delicate, translucent shell, with fine, radiating, opaque striæ and rays of a brownish colour.

Fig. Conch. Icon. t. 11. fig. 38.

Hab. This is an abundant species in some localities; it is found among sea-weed at Port Philip, New South Wales, and also on the rocks near Eagle Hawk Neck and Tasman's Peninsula, Van Diemen's Land.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *MELEAGRINA*, Lam. Pearl Shells.

The *Meleagrinae*, or Pearl Oysters, are thicker, flatter, and less oblique shells than the ordinary *Aviculæ*. They are found at Ceylon, Madagascar, Feejee Islands, Australia, Panama, &c., and are largely imported into this country for economical and ornamental purposes, as they afford the mother-of-pearl, and also many of the pearls of commerce.

- E 90. The Pearl Oyster, *Meleagrina margaritifera*, Linn.

Fig. Encycl. Méth. pl. 177. figs. 1-4.

Hab. Ceylon.

Hunterian.

From this species the oriental pearls are obtained, and the shell itself affords the mother-of-pearl. Some of the specimens illustrate the formation of pearl.

- E 91. A single valve of the above species, which has been used for digging yams, &c. It was found by the officers of H.M.S. 'Calliope,' in a cave used as a burying-place, in the Isle of Pines, in the hand of a woman buried there.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 92. The *Meleagrina margaritifera*, showing an irregular deposition of the nacreous or pearly matter on both valves.

Presented by John Quekett.

- E 93. The *Meleagrina (Avicula) Cumingii*, Reeve.

Fig. Reeve, Conch. Icon. pl. 4. fig. 6.

Hab. Lord Hood's Island.

Presented by John Quekett.

Genus MALLEUS, Lam.

- E 94. The Hammer Oyster, *Malleus vulgaris*, Lam.

Fig. Encycl. Méth. pl. 177. fig. 12.

Hab. Vavou.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus VULSELLA, Lam.

- E 95. Two specimens of the *Vulsella lingulata*, Lam.

Fig. Encycl. Méth. pl. 178. fig. 4.

Hab. Red Sea.

Purchased.

- E 96. A group of *Vulsella spongiarium*, Lam., imbedded in a mass of sponge, showing the growth of the shell with the upward growth of the sponge.

Fig. Lam. Anim. sans Vert. vol. vii. p. 268.

Hab. Abyssinia.

Presented by Mr. Salt, 1811.

Genus *PERNA*, Brug.

Shell long, fragile, compressed ; hinge with elongate cartilage-pits ; valves with a byssal sinus. Natives of tropical seas.

E 97. The *Perna femoralis*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 76.

Hab. Society Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus *CRENATULA*, Lam.

Shell oblong, compressed ; no byssal sinus ; cartilage-pits close-set, shallow, crescent-shaped.

E 98. The *Crenatula avicularis*, Lam.

Fig. Ann. du Muséum, vol. iii. t. 2. figs. 1, 2.

Hab. American Seas. *Purchased.*

E 99. The *Crenatula mytiloides*, Lam.

Fig. Anim. sans Vert. vol. vii. p. 73.

Hab. Red Sea. *Purchased.*

Genus *PINNA*, Linn.

Wedge-shaped, equivalve, edentulous shells, with the posterior side truncate, and slightly gaping for the passage of the byssus of attachment. The species are widely distributed ; the fossil forms range from the Carboniferous to the Tertiary strata.

The byssus of the *Pinna* has been sometimes used for economical purposes.

E 100. The *Pinna nigrina*, Lam.

Fig. Encycl. Méthod. pl. 199.

Hab. Indian Ocean. *Hunterian.*

E 101. The *Pinna nobilis*, Linn.

Fig. Encycl. Méthod. pl. 200. fig. 1.

Hab. Mediterranean. *Presented by Madame Jeannette Power.*

E 102. The *Pinna squamosa*, Gmel.

Fig. Lam. Anim. sans Vert. vol. vii. p. 63.

Hab. Atlantic.

Presented by Madame Jeannette Power.

E 103. A variety of *Pinna nigrina*?, with erect spines, but allied to *P. exusta*, Gmel.

Fig. Chemnitz, vol. viii. fig. 782.

Hab. Indian Ocean.

Hunterian.

E 104. *Pinna Cumingii*, Hanley.

Hab. Cape of Good Hope.

Hunterian.

Family *Mytilidæ*.

The *Mytilidæ* are oval, elongate, edentulous shells, with a thick and sometimes filamentous epidermis, attached by a byssus, and frequently spinning a nest in which they are imbedded, or burrowing into soft bodies, or entangled among sea-weeds.

Genus MYTILUS, Linn.

Shell wedge-shaped; umbones terminal, pointed.

The species are widely distributed, occurring in all seas: the fossil species range from the Permian to the Tertiary strata.

E 105. The Common edible Mussel, *Mytilus edulis*, Linn.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 170.

Hab. Whitsand Bay, Cornwall, Torquay, &c.

Hunterian.

E 106. A series of specimens of *Mytilus canaliculus*, Martyn.

Fig. Martyn, Conch. Univers. pl. 78.

Hab. Southern Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 107. The *Mytilus afer*, Gmelin.

Fig. Reeve, Conch. Icon. pl. 2. fig. 3.

Hab. Algiers.

Purchased.

- E 108. The *Mytilus Magellanicus*, Chemn.

Fig. Lam. Anim. sans Vert. vol. vii. p. 37.

Hab. Southern Ocean. *Hunterian, and Capt. Sir E. Home, Bart., R.N.*

- E 109. The *Mytilus Menkeanus*, Reeve.

Fig. Reeve, Conch. Icon. pl. 7. fig. 26.

Hab. King George's Sound.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 110. A group of *Mytili* imbedded in sea-weed.

Hab. Bay of Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 111. The *Mytilus hirsutus*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 38.

Hab. Bay of Islands, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus MODIOLA, Lam.

The *Modiolæ* are oblong edentulous shells, with obtuse anterior umbones, a thick epidermis, and a large byssus.

The species are widely distributed, but chiefly tropical: the fossil forms range from the Palæozoic to the Tertiary strata.

- E 112. The *Modiola modiolus*, Linn.

Fig. Brit. Moll. vol. ii. p. 182. pl. 44. fig. 3.

Hab. British Seas.

Hunterian.

- E 113. The *Modiola albicostata*, Lam.

Fig. Anim. sans Vert. vol. vii. p. 19.

Hab. Indian Ocean.

Hunterian.

- E 114. The *Modiola (Crenella) discors*, Lam., not Linn.; *M. impactus*, Herman.

Fig. Lam. Anim. sans Vert. vol. vii. p. 23.

Hab. Monganui, New Zealand.

This species frequently spins a kind of nest, in which it is partially concealed.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 115. The *Modiola (Modiolarca) trapezina*, Gray.

Fig. Woodward's Manual of Mollusca, p. 266.

Hab. South Seas, attached to floating sea-weed.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus LITHODOMUS, Cuv.

The *Lithodomi*, or 'Date-shells,' are cylindrical elongate shells, anteriorly rounded, posteriorly wedge-shaped, with a thick and dark epidermis. They burrow into shells, corals and limestone rocks—hence their name. Chiefly natives of the tropics: the fossil species are found in the Secondary and Tertiary strata.

- E 116. The *Lithodomus attenuatus*, Desh. sp.

Fig. Lam. Anim. sans Vert. vii. p. 28.

Hab. Panama.

Purchased.

- E 117. The *Lithodomus dactylus*, Linn. (var.)

Fig. Encycl. Méth. pl. 221. figs. 6, 7.

Hab. Isle of Pines.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 118. An ovate species of *Lithodomus*.

Hab. Lord Hood's Island.

Purchased.

- E 119. The *Lithodomus caudigerus*, Lam.

Fig. Sow. Genera of Shells, fig. 4. Encycl. Méth. pl. 221. fig. 8.

Hab. Panama.

Purchased.

Genus DREISSENA, Van Beneden.

- E 120. The *Dreissena polymorpha*, Pallas.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 165.

Hab. Regent's Canal. This is a naturalized species; it is a native of the rivers of the Aralo-Caspian area, and was originally introduced into this country with foreign timber, and is now widely spread in many of the docks, rivers, and canals of England. *Presented by John Quekett.*

Family *Arcadæ*.Genus *ARCA*, Linn.

The Ark-shells are equivalve, or inequivalve and inequilateral, with prominent umbones, which are more or less distantly separated from each other. The hinge is linear and straight, composed of a series of small, numerous, plate-like teeth.

The *Arcæ* are divided into two sections, in one (*Arca* proper) the animal lives free and unattached, in sand or mud; in the other section they are attached to rocks, &c. by a horny byssus, which passes through an opening between the margins of the valves. In the first group the shells are generally solid and ribbed, and often inequivalved; in the second group the shells are irregular, less solid, not so distinctly ribbed, and generally covered with a thin or shaggy epidermis. This group constitutes the *Bysso-arca* of Swainson.

- E 121. The *Arca grandis*, Brod. and Sow.

Fig. Zool. Journ. vol. iv. p. 365.

Hab. West Pacific.

Purchased.

- E 122. A species of *Arca* with divided ribs.

Hab. Pacific Ocean.

Purchased.

- E 123. Six specimens of *Arca*, allied to *A. maculosa*.

Fig. Reeve, Conch. Icon. *Arca*, fig. 24.

Hab. Pacific.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 124. Specimen of *Arca fusca*, Brug.

Fig. Encycl. Méth. pl. 308. fig. 5.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 125. The *Arca* (*Bysso-arca*) *pacifica*, Sow.

Fig. Proc. Zool. Soc. 1833, p. 17.

Hab. Bijooga Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 126. The *Arca decussata*, Reeve.
Fig. Reeve, Conch. Icon. *Arca*, fig. 82.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 127. The *Arca (Byssio-arca) Noæ*, Linn.
Fig. Reeve, Conch. Icon. pl. 11. fig. 72.
Hab. Mediterranean. *Hunterian.*
- E 128. The *Arca (Byssio-arca) zebra*, Swainson.
Fig. Reeve, Conch. Icon. pl. 11. fig. 69.
Hab. Morea. *Purchased.*
- E 129. The *Arca tortuosa*, Linn. A remarkably twisted form of shell, with the keel running down from the umbone to the margin, forming a wing-like expansion.
Fig. Lam. Anim. sans Vert. vi. p. 460.
Hab. Singapore. Malacca, in coarse sand and gravel. *Hunterian.*
- E 130. A species of *Arca (Byssio-arca)* with numerous granulated ribs.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

GENUS CUCULLÆA, Lam.

The recent species is found at Mauritius and China; the fossil species range from the Lower Silurian to the Tertiary strata.

- E 131. The *Cucullæa auriculifera*, Lam. The interiors of the valves show the raised plate for the support of the anterior muscle, and which, with the arrangement of the hinge-teeth, distinguish this genus from *Arca*.
Fig. Encycl. Méth. pl. 304. fig. 1.
Hab. China. *Purchased.*

GENUS PECTUNCULUS, Lam.

The *Pectunculi* are orbicular shells, the umbones separated by a small striated ligamental area; hinge with a semicircular row of oblique teeth.

The species inhabit the British and Mediterranean Seas, the Indian and

Pacific Oceans, and New Zealand, ranging from 8 to 60 fathoms. The fossil species occur in the Cretaceous and Tertiary strata.

- E 132. The *Pectunculus glycymeris* (Arca), Linn.

Fig. Encycl. Méth. pl. 310. fig. 3.

Hab. British Seas, Plymouth, &c.

Presented by Mr. J. Rowse.

- E 133. The *Pectunculus ovatus*, Quoy (*P. laticostatus*, Quoy and Gaimard).

Fig. Voy. de l'Astrolabe, pl. 77. figs. 1-6.

Hab. Feejee Islands. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 134. The *Pectunculus pectiniformis*, Lam. (*Arca pectunculus*, Linn.)

Fig. Syst. Nat. p. 1142. Encycl. Méth. pl. 311. fig. 5.

Hab. Southern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 135. The *Pectunculus holosericeus*, Reeve.

Hab. Kapiti, Cook's Straits.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus SOLENELLA, Sowerby.

- E 136. The *Solenella Norrisii*, Sow.

Fig. Woodward's Mollusca, p. 270. Sow. Gen. of Shells, No. 39.

Hab. Valparaiso.

Purchased.

Genus SOLEMYA, Lam.

An elongated gaping shell, with a dark horny epidermis extending beyond the margins of the valves.

- E 137. The *Solemya Mediterranea*, Lam.

Fig. Anim. sans Vert. vi. p. 125. Encycl. Méth. pl. 225. fig. 4.

Hab. Sicily.

Purchased.

E 138. The *Solemya australis*, Lam.

Fig. Blainv. Malac. pl. 79. fig. 1.

Hab. Southern Seas.

Purchased.

Genus *NUCULA*, Lam.

A more or less trigonal shell with an olive epidermis ; hinge with an internal cartilage-pit and series of teeth on each side ; pallial line simple.

E 139. The *Nucula margaritacea*, Lam. (*N. nucleus*, Forbes and Hanley.)

Fig. Brit. Moll. ii. p. 215.

Hab. Coast of Britain.

Hunterian.

Genus *LEDA*, Schumacher.

Shell oblong, produced posteriorly, rounded in front ; pallial line with a small sinus.

E 140. The *Leda eburnea* (*Nucula*, sp.), Sow.

Fig. Sow. Proc. Zool. Soc. 1832, p. 198.

Hab. West Columbia.

Purchased.

E 141. The *Leda crenifera* (*Nucula*, sp.), Sow.

Fig. Proc. Zool. Soc. 1832, part 2. p. 197.

Hab. West Columbia.

Purchased.

Family *Trigoniidæ*.

Equivalve, trigonal, ribbed shells, with an external ligament ; hinge-teeth diverging and transversely grooved ; pallial line simple ; inner surface nacreous.

This family includes *Trigonia*, and the fossil genera *Myophoria*, *Axinus*, and *Lyrodesma*.

Genus *TRIGONIA*, Brug.

The two or three species of this genus are of small size, and restricted to the

coasts of Australia. The fossil species are numerous, frequently of large size, and occur in the Secondary strata of Europe, Africa, South America, and India, of which deposits the genus *Trigonia* may be considered a characteristic fossil.

E 142. A series of specimens of the *Trigonia pectinata*, Lam.

Fig. Voy. de l'Astrolabe, pl. 78. figs. 1-4.

Hab. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Unionidæ*.

Shell regular, equivalve, closed ; hinge-line with teeth, or edentulous ; epidermis more or less thick ; ligament external, prominent ; shell nacreous.

The genera of this family inhabit the freshwater ponds and streams, and are widely distributed. The species of *Unio* abound in North America. The more peculiar generic forms occur in South America, Africa, and China. Fossil species of *Unio* are found in the Wealden and Tertiary freshwater deposits.

Genus *UNIO*, Retzius.

E 143. Six specimens of *Unio tumidus*, Retzius.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 140.

Hab. Surrey Canal.

Presented by Mr. J. Rowse.

E 144. Six specimens of *Unio pictorum*, Linn.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 142.

Hab. Surrey Canal.

Presented by Mr. J. Rowse.

E 145. *Unio naviformis*, var., Lam.

Fig. Lam. Anim. sans Vert. vol. vi. p. 537.

Hab. United States.

Presented by Harvey Holl, Esq., M.D.

E 146. An elongated species of *Unio*, compressed and tuberculated posteriorly.

Hab. Australia.

Presented by Lieut. Burnaby, R.N.

- E 147. Two specimens, of subovate form, of a species of *Unio*.

Hab. United States.

Purchased.

Subgenus SYMPHYNOTA, Swainson (*Dipsas*, Leach).

Valves produced into a thin dorsal wing.

- E 148. *Unio (Symphynota) plicatus*, Leach.

Fig. Quekett, Lectures on Histology, vol. ii. p. 369.

Hab. China.

This species is used by the Chinese for producing pearls; they introduce small shot or other bodies between the mantle of the animal and the shell, which bodies in time become coated over with pearly matter.

Hunterian.

- E 149. The *Unio (Symphynota) plicatus*, Leach.

Hab. China.

Hunterian.

Subgenus ALASMODON, Say.

- E 150. The *Unio (Alasmodon) margaritifera*, Linn.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 146. pl. 38.

Hab. Rivers of North Wales, Scotland, &c.

This species, commonly called the Pearl Mussel, is found in the rivers of the mountain districts of Wales and Scotland, and is the chief source from which the celebrated British pearls are obtained.

Presented by John Quekett.

Genus HYRIA, Lam.

- E 151. The *Hyria syrmatophora*, Gronov. (*Hyria avicularis*, Lam.)

Fig. Lam. Anim. sans Vert. vi. p. 561.

Hab. South America.

Hunterian.

Genus CASTALIA, Lam.

- E 152. The *Castalia ambigua*, Lam.

Fig. Lam. Anim. sans Vert. vi. p. 523.

Hab. South America.

Hunterian.

Genus ANODON, Cuv.

Shell smooth, thin, edentulous.

- E 153. A series of specimens of the Swan Mussel, *Anodon cygneus*, Linn. sp., in various stages of growth.

Hab. Surrey Canal.

Presented by Mr. J. Rowse.

- E 154. The Swan Mussel, *Anodon cygneus*, Linn.

Fig. Forbes and Hanley, Brit. Moll. ii. p. 155. pl. 39. fig. 3.

Hab. Pond at Hartwell House, Bucks. *Presented by Dr. J. Lee, F.R.S.*

- E 155. The *Anodon Parisii*. One specimen perfect, and one with the valves uncoated.

Hab. North America.

Purchased.

- E 156. The *Anodon rubens*, Lam.

Fig. Lam. Anim. sans Vert. vi. p. 566. Encycl. pl. 201. fig. 1.

Hab. Senegal.

Purchased.

Genus IRIDINA, Lam.

Shell oblong ; hinge-line long, straight, crenated by numerous unequal teeth.

- E 157. The *Iridina exotica*, Lam.

Fig. Anim. sans Vert. vi. p. 571.

Hab. River Nile, Africa.

Purchased.

Genus PLEIODON, Conrad.

- E 158. The *Pleiodon ovata*, Swainson.

Fig. Reeve, Conch. Syst. pl. 93.

Hab. River Nile.

Purchased.

Genus ÆTHERIA, Lam.

- E 159. The *Ætheria semilunata*, Lam., attached to a piece of wood.

Fig. Lam. Anim. sans Vert. vi. p. 595.

Hab. River Senegal.

The freshwater Oysters noticed by Bruce in his 'Travels' belong to this species.

Hunterian.

E 160. A group of the *Ætheria semilunata*, Lam., of various sizes, attached to each other. The umbone of the convex valve is much eroded, and the interior presents many vesicular projections of nacreous matter.

Fig. Lam. Anim. sans Vert. vi. p. 595.

Hab. River Senegal.

Hunterian.

SIPHONIDÆ.

The Molluscs of this division are provided with distinct respiratory siphons, and the lobes of the mantle are more or less united.

a. INTEGROPALLIALIA. Siphons short ; pallial line simple.

Family *Chamidæ*.

Irregular, inequivalve thick shells, generally attached by the left valve, with two hinge-teeth in one valve, and one thick tooth in the other. This family includes the recent genus *Chama*, and the extinct genera *Diceras* and *Requienia*.

Genus CHAMA, Linn.

The *Chamas* are natives of tropical seas, and chiefly found attached to coral reefs.

E 161. The *Chama Lazarus*, Lam.

Fig. Encycl. Méth. pl. 196. figs. 4, 5.

Hab. Pacific Ocean.

Hunterian.

E 162. Different varieties of a species of *Chama*.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Tridacnidæ*.

Regular, equivalved thick shells, strongly ribbed, and attached by means of a byssus.

To this family belong some of the more compact, thick, as well as the largest shells of the bivalve molluscs ; specimens of the *Tridacna gigas*, or Clam Shell, have weighed upwards of 400 pounds, and measured more

than 3 feet across by 2 feet deep. According to Dillwyn, a specimen in the church of St. Sulpice, at Paris, weighs upwards of 500 pounds.

Genus TRIDACNA, Brug.

The Clam Shells generally inhabit the coral reefs, and are natives of the Indian and Pacific Oceans.

- E 163. A pair of valves of the *Tridacna gigas*, Lam., measuring 2 feet 10 inches across, and weighing together 165 pounds.

Fig. Quoy, Voy. de l'Astrolabe, Moll. pl. 79. figs. 4, 5.

Hab. South Seas.

Hunterian.

- E 164. A single valve of the same species of *Tridacna*, *T. gigas*, Lam. Although of about the same size as the corresponding valve in the preceding specimen, it is much thicker, and of the great weight of 143 pounds.

Hab. South Seas.

Presented by John Macmeikan, Esq., F.R.C.S.E.

- E 165. The *Tridacna serrifera*, Lam.

Fig. Encycl. Méth. p. 235. fig. 3.

Hab. Indian Ocean.

Presented by John Quekett.

- E 166. The *Tridacna squamosa*, Chemn.

Fig. Encycl. Méth. pl. 236. fig. 1 *a*, *b*.

Hab. Indian Ocean.

Hunterian.

- E 167. The *Tridacna elongata*, Lam.

Fig. Encycl. Méth. pl. 235. fig. 4.

Hab. Indian Ocean.

Hunterian.

Genus HIPPOPUS, Lam.

Hippopus is distinguished from *Tridacna* by having the valves closed, and two teeth in each valve.

- E 168. The *Hippopus maculatus*, Lam.

Fig. Encycl. Méth. pl. 236. fig. 2 *a*, *b*.

Hab. The Coral reefs, South Seas.

Presented by John Quekett.

Family *Cardiadae*.Genus *CARDIUM*, Linn.

The *Cardiums*, or Cockle-shells, are heart-shaped, equivalve, generally ribbed shells, with prominent umbones. The hinge is composed of two central teeth, interlocking cross-wise, and two remote lateral teeth. The species are widely distributed, and range in depth from the littoral zone to about 150 fathoms. The fossil species are found in the Secondary and Tertiary strata.

E 169. The File-like Cockle, *Cardium pseudo-lima*, Lam.

Fig. Reeve, Conch. Icon. fig. 4.

Hab. East coast of Africa.

Purchased.

E 170. A large and fine specimen of the Lofty Cockle, *Cardium elatum*, Sow.

One of the largest species of the genus.

Fig. Sow. Proc. Zool. Soc. 1837. Conch. Icon. fig. 41.

Hab. Bay of California.

Hunterian.

E 171. Two fine specimens of *Cardium elongatum*, Brug. The flattened ribs and narrow interspaces are very characteristic in this species.

Fig. Reeve, Conch. Icon. pl. 9. fig. 46.

Hab. Philippines, coral sand in deep water.

Presented by Capt. Sir E. Home, Bart., R.N.

E 172. Two specimens of the Ribbed Cockle, *Cardium costatum*, Linn. A remarkable shell, with distant, compressed, narrow elevated ribs.

Fig. Encycl. Méth. pl. 293. fig. 1.

Hab. East coast of Africa.

Hunterian, and Purchased.

E 173. The Grinning Cockle, *Cardium ringens*, Chemn.

Fig. Chemnitz, Conch. Cab. vol. vi. p. 176. pl. 16. fig. 170.

Hab. Mouth of the Gambia, Africa, in sandy mud.

Purchased.

- E 174. The *Cardium subelongatum*, Sow.
Fig. Sow. Proc. Zool. Soc. 1840. Reeve, Conch. Icon. pl. 11. fig. 57.
Hab. West Indies. Hunterian.
- E 175. Four specimens of *Cardium Australe*, Sow.
Fig. Reeve, Conch. Icon. fig. 97.
Hab. Tongataboo. Presented by Capt. Sir E. Home, Bart., R.N.
- E 176. The *Cardium striatulum*, Sow.
Fig. Reeve, Conch. Icon. fig. 60.
Hab. New Zealand. Presented by Sir E. Home, Bart., R.N.
- E 177. The Lyrated Cockle, *Cardium lyratum*, Sow.
Fig. Reeve, Conch. Icon. fig. 12.
Hab. Philippines. Presented by Lieut. Burnaby, R.N.
- E 178. The Broad Cockle, *Cardium latum*, Born.
Fig. Test. Mus. Cæs. Vind. pl. 3. fig. 9.
Hab. Philippines. Presented by Lieut. Burnaby, R.N.
- E 179. A species allied to *Cardium alternatum*, Sow.
Fig. Sow. Proc. Zool. Soc. 1840.
Hab. Philippines. Presented by Lieut. Burnaby, R.N.
- E 180. A species of *Cardium* allied to *C. alternatum*, Sow.
Hab. Unrecorded. Hunterian.
- E 181. The *Cardium echinatum*, Linn.
Fig. Brit. Moll. vol. ii. p. 7. pl. 33. fig. 2.
Hab. South coast of Britain, and Seas of Europe.
Presented by Mr. J. Rowse.
- E 182. *Cardium rusticum* (*C. tuberculatum*), Linn.
Fig. Brit. Moll. vol. ii. p. 11. pl. 31. figs. 3, 4.
Hab. British Seas. Hunterian.

- E 183. The *Cardium nodosum*, Turton.

Fig. Brit. Moll. vol. ii. p. 22. pl. 32. fig. 7.

Hab. Plymouth, &c.

Presented by Mr. J. Rowse.

- E 184. The *Cardium Norvegicum*, Spengler (*Cardium lævigatum*, Penn.).

Fig. Brit. Moll. p. 35.

Hab. Coast of Britain.

Presented by Mrs. Robinson.

- E 185. The Strawberry Cockle, *Cardium unedo*, Linn.

Fig. Reeve, Conch. Icon. pl. 2. fig. 13.

Hab. Ceylon ; Philippines, in sandy mud at low water.

Presented by Lord Valentia.

- E 186. The *Cardium hemicardium*, Linn.

Fig. Encycl. Méth. pl. 295. fig. 2.

Hab. Philippines, in sandy mud at low water.

Presented by Lord Valentia.

- E 187. The *Cardium fragrum*, Linn.

Fig. Reeve, Conch. Icon. pl. 4. fig. 23.

Hab. China, Philippines, &c.

Hunterian.

Family *Lucinidæ*.

Genus CORBIS, Cuvier.

Shell oval, ventricose, concentrically sculptured ; muscular impressions ovate.

Two species are known.

- E 188. The *Corbis fimbriata*, Cuv.

Fig. Encycl. Méth. pl. 286. fig. 3.

Hab. Mauritius.

Purchased.

Genus LUCINA, Brug.

Shell orbicular ; ligament partly internal ; anterior muscular impression elongate.

The *Lucinæ* are chiefly found in the tropical and temperate seas, and range from the littoral zone to 150 fathoms.

- E 189. Three specimens of *Lucina tigrina*, Linn. sp.

Fig. Reeve, Conch. Icon. pl. 1. fig. 3.

Hab. West Indies.

In this, and some allied species, the ligament is concealed between the valves. *Hunterian.*

- E 190. A polished specimen of *Lucina Jamaicensis*, Chemn. sp., in which the concentric lamellæ are obliterated. This species has been called the 'Apricot,' from the colour of its shell.

Fig. Chemn. Conch. Cab. vol. vii. p. 24. pl. 38. figs. 408, 409.

Hab. Jamaica.

Hunterian.

- E 191. A variety of *Lucina Pennsylvanica*, Linn. sp.

Fig. Reeve, Conch. Icon. pl. 6. fig. 29.

Hab. Jamaica.

The arrangement of the horny epidermis on the concentric lamella is peculiar in this species. *Purchased.*

- E 192 The *Lucina borealis*, Linn. sp. (*L. radula*, Lam.)

Fig. Brit. Moll. vol. ii. p. 46. pl. 35. fig. 5.

Hab. British Seas, North Sea, and United States.

A widely distributed species, and occurs fossil in the more recent Tertiary and Crag deposits. *Hunterian.*

- E 193. A variety of *Lucina divaricata*, Linn. sp.

Fig. Reeve, Conch. Icon. pl. 8. fig. 47.

Hab. Bay of Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

A widely distributed and slightly variable form. This species was considered by Lamarck as identical with the fossil forms which occur in the Eocene deposits of Paris.

- E 194. Two specimens of *Lucina divaricata*, Linn.

Hab. New Zealand. *Presented by R. K. Prendergast, Esq., M.D.*

- E 195. The *Lucina interrupta*, var., Lam. sp.

Fig. Reeve, Conch. Icon. fig. 5.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 196. The *Lucina rugifera*, Reeve.

Fig. Reeve, Conch. Icon. fig. 1.

Hab. Pacific. *Purchased.*

Family *Cycladidæ*.

Shell equivalve, suborbicular, closed; ligament external; epidermis thick, horny; umbones frequently eroded.

Genus CYRENA, Lam.

The recent species of this genus are gregarious, and found in the rivers and brackish waters of the warmer regions of the globe. The fossil species are found in the Wealden and Tertiary strata.

- E 197. *Cyrena violacea*, Lam.

Fig. Encycl. Méth. pl. 301. fig. 1.

Hab. Java. *Purchased.*

- E 198. *Cyrena tenebrosa*, Hinds.

Hab. In the rivers, Feejee Islands.

In relation to the Feejee Islands Dr. Pickering remarks, that "In fluviatile shells these islands are richer than the eastern ones, no doubt on account of their larger size, and the consequent greater abundance of fresh water. A *freshwater bivalve Cyrena* was here for the first time met with among the islands. Among land-shells we missed *Partula*. The appearance of large *Bulimi* reminded one of the Continent."

Presented by Capt. Sir E. Home, Bart., R.N.

- E 199. *Cyrena consobrina*, Caill.

Fig. Caill. Voy. Egypt. ii. tab. 61. figs. 10, 11.

Hab. River Nile.

This species is considered to be similar to that found in the mammalian deposits of the Valley of the Thames. *Hunterian.*

E 200. *Cyrena Zeylanica*, Lam.*Fig.* Encycl. Méth. pl. 302. fig. 4 *a*, *b*.*Hab.* Island of Ceylon.*Hunterian.*

Genus CYCLAS, Brug.

The recent species of this genus inhabit the rivers of the north temperate zone.

E 201. The River Cockle, *Cyclas rivicola*, Leach.*Fig.* Lam. Anim. sans Vert. vi. p. 267.*Hab.* Britain.*Hunterian, and Presented by Mr. J. Rowse.*E 202. The *Cyclas cornea*, Linn. sp.*Fig.* Lam. Anim. sans Vert. vi. p. 268.*Hab.* Ponds at Hampstead.*Presented by Mr. J. Rowse.*E 203. The *Cyclas (Sphærium) pisidioides*, Gray.*Fig.* Ann. Nat. Hist. ser. 2. vol. xvii. p. 25.*Hab.* Regent's Canal.*Presented by Mr. J. Rowse.*E 204. The *Cyclas (Sphærium) pallidum*, Gray.*Fig.* Ann. Nat. Hist. ser. 2. vol. xvii. p. 465.*Hab.* Regent's Canal.*Presented by Mr. J. Rowse.*

Subgenus PISIDIUM, Pfeiffer.

E 205. The *Pisidium amnicum*, Mull. sp.*Fig.* Turt. Biv. tab. 11. fig. 25.*Hab.* Regent's Canal.*Presented by Mr. J. Rowse.*E 206. The *Pisidium cinereum*.*Hab.* Plymouth, Devonshire.*Presented by Mr. J. Rowse.*E 207. The *Pisidium Henslovianum*, Shep. sp.*Fig.* Turt. Man. fig. 6.*Hab.* Canal, Regent's Park.*Presented by Mr. J. Rowse.*

Family *Astartidæ*.Genus *ASTARTE*, Sow. (*Crassina*, Lam.)E 208. The *Astarte sulcata*, Mont.

Two varieties of the same species from Plymouth, in 40 fathoms.

Fig. Forbes and Hanley, Brit. Moll. vol. i. pl. 30.

Hab. British Seas.

Purchased.

E 209. The *Astarte arctica*, Gray.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 461. pl. 30. fig. 7.

Hab. Spitzbergen and North Sea.

Purchased.

Genus *CRASSATELLA*, Lam.E 210. Two specimens of *Crassatella decipiens*, Reeve.

Fig. Reeve, Conch. Icon. fig. 4.

Hab. Coast of New Holland.

Purchased.

Family *Cyprinidæ*.

The *Cyprinidæ* include a certain number of extinct genera, as *Opis*, *Cardinia*, *Megalodon*, &c.; the recent genera are *Cyprina* and *Cardita*.

Genus *CYPRINA*, Lam.E 211. Two specimens of *Cyprina Islandica*, Lam.

Fig. Forbes and Hanley, Brit. Moll. vol. i. pl. 27.

Hab. British Seas.

Hunterian.

Genus *CIRCE*, Schumacher.E 212. The *Circe gibbia*, Lam.

Hab. Indian Ocean.

Hunterian.

E 213. A series of specimens of *Circe gibbia*, Lam.

Fig. Encycl. Méth. pl. 271. fig. 4.

Hab. Isle of Pines.

Presented by Capt. Sir E. Home, Bart., R.N.

E 214. The *Circe pectinata*, Lam.

Fig. Encycl. Méth. pl. 271. fig. 1.

Hab. Isle of Pines.

Hunterian.

Genus ISOCARDIA, Lam.

- E 215. The Heart Cockle,
- Isocardia cor*
- , Lam.

Fig. Lam. Anim. sans Vert. vol. vi. p. 445.*Hab.* Dublin Bay.*Presented by Mr. J. Rowse.*

- E 216. The
- Isocardia Moltkiana*
- , Lam.

Fig. Encycl. Méth. pl. 233. fig. 1 *a, b, c, d.**Hab.* China.*Purchased.*

- E 217. The
- Isocardia Lamarekii*
- , Reeve.

Fig. Conch. Icon. *Isocardia*, fig. 5.*Hab.* China.*Purchased.*

Genus CYPRICARDIA, Lam.

The *Cypricardiæ* are oblong shells with a short anterior side, and the posterior obliquely angulated. The recent species are found in the Red Sea, India, and Australia; the fossil species range from the Lower Silurian to the Tertiary strata.

- E 218. The
- Cypricardia Guinaica*
- , Lam.

Fig. Lam. Anim. sans Vert. vol. vi. p. 438.*Hab.* Lord Hood's Island.*Purchased.*

- E 219. The
- Cypricardia rostrata*
- , Lam. var.

Fig. Lam. Anim. sans Vert. vol. vi. p. 439.*Hab.* Isle of Pines.*Presented by Capt. Sir E. Home, Bart., R.N.*Genus CARDITA, Bruguière (*Venericardia*, Lam.).

Shell oblong, cordate, ventricose, with or without lateral teeth. The *Carditæ* chiefly inhabit the tropical seas, in shallow water on rocky bottoms; the section without lateral teeth (*Venericardia*) are found on coarse sand or mud. Fossil forms referred to this genus occur in the Secondary and Tertiary strata; some of the species of *Venericardia* attained a large size in the Eocene deposits.

- E 220. The *Cardita Tankervillei*, Wood (*C. australis*, Lam.?).
Fig. Wood, Index Test. Supp. p. 57.
Hab. Australia. *Purchased.*
- E 221. The *Cardita radiata*, Broderip.
Fig. Brod. Proc. Zool. Soc. 1832.
Hab. Panama, in muddy sand, from 6 to 12 fathoms. *Purchased.*
- E 222. The *Cardita laticostata*, Sow.
Fig. Sow. Proc. Zool. Soc. 1832.
Hab. Panama, in coarse sand, from 10 to 12 fathoms. *Purchased.*
- E 223. The *Cardita ajar*, Brug.
Fig. Lam. Anim. sans Vert. vol. vi. p. 426.
Hab. Senegal. *Presented by Lord Valentia.*
- E 224. The *Cardita semiorbiculata* (*Chama*), Linn. (*C. phrenetica*, Lam.)
Fig. Reeve, Conch. Icon. pl. 3. fig. 10.
Hab. Philippine Islands. *Purchased.*

b. SINUPALLIALIA. Siphons long; pallial line sinuated.

Family *Veneridæ*.

Oblong or suborbicular shells, with an external ligament, and generally three diverging teeth on each valve; pallial line sinuated. The *Veneridæ* are widely distributed, and abound in the tropical seas; the fossil species occur in the Secondary and Tertiary strata.

Genus *VENUS*, Linn.

- E 225. The *Venus paphia*, Linn.
Fig. Encycl. Méth. pl. 275. fig. 5 a, b.
Hab. West Indies. *Hunterian.*

- E 226. The *Venus casina*, Linn.
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 405.
Hab. Plymouth. Hunterian.
- E 227. The *Venus corbis*, Lam.
Fig. Encycl. Méth. pl. 276. fig. 4.
Hab. Tongataboo. Presented by Capt. Sir E. Home, Bart., R.N.
- E 228. The *Venus fasciata*, Donovan.
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 415.
Hab. Falmouth. Presented by Mr. J. Rowse.
- E 229. The *Venus Zeylandica*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, pl. 84. fig. 5.
Hab. Isle of Pines. Presented by Capt. Sir E. Home, Bart., R.N.
- E 230. The *Venus costata*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, tab. 84. figs. 1, 2.
Hab. New Zealand. Presented by Capt. Sir E. Home, Bart., R.N.
- E 231. The *Venus plicata*, Gmelin.
Fig. Lam. Anim. sans Vert. vol. vi. p. 341.
Hab. Indian Ocean. Hunterian.
- E 232. The *Venus lamellata*, Lam.
Fig. Lam. Anim. sans Vert. vol. vi. p. 349.
Hab. New Holland. Hunterian.
- E 233. The *Venus gnidia*, Brod. and Sow.
Fig. Zool. Journal, vol. iv. p. 364.
Hab. Indian Ocean. Purchased.
- E 234. The *Venus puerpera*, Linn.
Fig. Encycl. Méth. pl. 278. fig. 1.
Hab. Indian Ocean. Presented by Capt. Sir E. Home, Bart., R.N.

- E 235. The *Venus gallina*, Linn.

Fig. Encycl. Méth. pl. 268. fig. 3.

Hab. Seas of Europe.

Hunterian.

Genus *MEROË*, Schum. (*Cuneus*, Megerle.)

Shell oval, compressed, anterior side longer than posterior; ligament placed in a deep furrow.

- E 236. The *Meroë picta*, Schum.

Fig. Encycl. Méth. pl. 241. fig. 1.

Hab. China.

Hunterian.

- E 237. A species of *Meroë*.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 238. A species of *Meroë*, with numerous zigzag markings.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *CYTHEREA*, Lam.

- E 239. The *Cytherea chione*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 396.

Hab. Coast of Devonshire.

Hunterian.

- E 240. The *Cytherea maculata*, Lam.

Fig. Encycl. Méth. pl. 265. fig. 4 *a, b*.

Hab. American Seas.

Hunterian.

- E 241. A variety of the *Cytherea maculata*, Lam.

Hab. Locality unrecorded.

Hunterian.

- E 242. *Cytherea dione*, Lam. The posterior side of the shell has two rows of spines, of which the anterior row is more continuous than the other.

Fig. Encycl. Méth. pl. 275. fig. 1 *a, b*.

Hab. West Indies.

Hunterian.

- E 243. The *Cytherea scripta*, Lam.
Fig. Encycl. Méth. pl. 273. fig. 1. & pl. 274. fig. 1.
Hab. Indian Ocean. *Hunterian.*
- E 244. The *Cytherea erycina*, Lam.
Fig. Encycl. Méth. pl. 264. fig. 2.
Hab. Indian Ocean. *Hunterian.*
- E 245. The *Cytherea lusoria*, Lam.
Fig. Encycl. Méth. pl. 270. fig. 1.
Hab. Indian Ocean. *Hunterian.*
- E 246. The *Cytherea petechialis*, Lam.
Fig. Encycl. Méth. pl. 268. fig. 6.
Hab. Indian Ocean. *Hunterian.*
- E 247. The *Cytherea flexuosa*, Lam.
Fig. Encycl. Méth. pl. 266. fig. 7.
Hab. Brazil. *Hunterian.*
- E 248. The *Cytherea castrensis*, Lam.
Fig. Encycl. Méth. pl. 273. fig. 1.
Hab. Indian Ocean. *Hunterian.*

Genus ARTEMIS, Poli.

Shell orbicular, compressed, concentrically laminated. *Artemis* differs from *Venus* and *Cytherea* in the form of the foot, in the united siphons, and the lanceolate triangular sinus, which is impressed on the interior of the shell.

- E 249. The *Artemis exoleta*, var., Linn. (*Cytherea*, sp., Lam.)
Fig. Anim. sans Vert. vol. vi. p. 314.
Hab. Atlantic, Mediterranean. *Hunterian.*
- E 250. The *Artemis lincta*, Pulteney, sp.
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 431.
Hab. Plymouth and British coast, from low-water mark to a depth of 60 fathoms. *Presented by Mr. J. Rowse.*

- E 251. The *Artemis anus*, Philippi.

Fig. Reeve, Conch. Icon. pl. 2. fig. 10.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 252. The *Artemis contusa*, Reeve.

Fig. Conch. Icon. pl. 7. fig. 38.

Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus *TAPES*, Mühlfeldt.

- E 253. The *Tapes papilionacea*, Lam.

Fig. Encycl. Méth. pl. 281. fig. 3.

Hab. Indian Ocean. *Purchased.*

- E 254. The *Tapes decussata*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 379.

Hab. Coast of France.

The animal is frequently used as food. *Presented by Mrs. Robinson.*

- E 255. The *Tapes aurea*, Gmelin.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 392.

Hab. Falmouth. *Hunterian.*

- E 256. The *Tapes pullastra*, Wood.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 382.

Hab. Coast of Devonshire. *Presented by Mr. J. Rowse.*

- E 257. The *Tapes costata*, Quoy, sp.

Fig. Quoy, Voy. de l'Astrolabe, pl. 84. fig. 42.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 258. The *Tapes literata*, var., Linn. sp.

Fig. Lam. Anim. sans Vert. vol. vi. p. 353.

Hab. Indian Ocean. *Hunterian.*

- E 259. The *Tapes virginea*, Linn. sp.

Fig. Lam. Anim. sans Vert. vol. vi. p. 360.

Hab. Seas of Europe.

Hunterian.

- E 260. The *Tapes textilis*, Gmelin, sp.

Fig. Encycl. Méth. pl. 283. fig. 1.

Hab. Indian Ocean.

Hunterian.

Genus VENERUPIS, Lam.

- E 261. The *Venerupis irus*, Lam.

Fig. Lam. Anim. sans Vert. vol. vi. p. 163.

Hab. Lyme Regis.

Presented by Mr. J. Rowse.

Genus PETRICOLA, Lam.

- E 262. The *Petricola lithophaga*, Retz.

Fig. Cat. of Conch. in Brit. Mus. pt. 1. p. 209.

Hab. Malta, in soft limestone.

Purchased.

- E 263. The *Petricola serrata*, Desh.

Fig. Proc. Zool. Soc. 1853.

Hab. Red Sea.

Purchased.

Genus GLAUCOMYA, Gray.

- E 264. The *Glaucomya Sinensis*, Gray.

Fig. Woodward, Manual of Mollusca, pl. 20. fig. 18.

Hab. China.

Purchased.

Family Mactridæ.

Equivalve, trigonal shells, with a more or less thick epidermis, and internal ligament.

Genus MACTRA, Linn.

The species of *Mactra* are widely distributed, especially in the tropical seas; they chiefly inhabit sandy coasts.

- E 265. The *Macra helvacea*, Chemn.
Fig. Encycl. Méth. pl. 256. fig. 1.
Hab. Mediterranean. *Hunterian.*
- E 266. The *Macra truncata*, Mont. (*Spisula*, Gray.)
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 354
Hab. South coast of Britain. *Presented by Mr. J. Rowse.*
- E 267. The *Macra stultorum*, Linn.
Fig. Encycl. Méth. pl. 256. fig. 2.
Hab. Whitsand Bay, Plymouth. *Presented by Mr. J. Rowse.*
- E 268. The *Macra polita*, Chemn. (*M. australis*, Lam.)
Fig. Anim. sans Vert. vol. vi. p. 101.
Hab. Australia. *Presented by Lord Valentia.*
- E 269. The *Macra polita*, Chemn.
Hab. Tongataboo. *Presented by Lord Valentia.*

Genus GNATHODON, Gray.

One recent and one fossil species.

- E 270. Two specimens of *Gnathodon cuneatus*, Gray.
Fig. Woodward, Manual of Mollusca, pl. 21. fig. 2.
Hab. New Orleans.
The town of Mobile, on the Gulf of Mexico, is built upon a bank of
some thickness, formed of this species. *Purchased.*

Genus LUTRARIA, Lam. The Otter's Shell.

The *Lutrariæ* are widely distributed ; the fossil species occur in the Miocene and superior strata.

- E 271. The *Lutraria oblonga*, Gmel.
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 374.
Hab. Coasts of Britain. *Presented by Mr. J. Rowse.*

Family *Tellinidæ*.

The *Tellinidæ* are widely distributed, inhabiting sandy bottoms in the littoral and laminarian zones.

Genus *TELLINA*, Linn.E 272. The *Tellina remies*, Linn.

Fig. Encycl. Méth. pl. 290. fig. 2.

Hab. Indian Ocean.

Hunterian.

E 273. The *Tellina rugosa*, Born.

Fig. Encycl. Méth. pl. 290. fig. 1.

Hab. Indian Ocean.

Presented by Lord Valentia.

E 274. The *Tellina virgata*, Linn.

Fig. Encycl. Méth. pl. 288. figs. 2-4.

Hab. Indian Ocean.

Presented by Lord Valentia.

E 275. The *Tellina foliacea*, Linn.

Fig. Encycl. Méth. pl. 287. fig. 4.

Hab. Indian Ocean.

Presented by Lord Valentia.

E 276. The *Tellina scobinata*, Linn.

Fig. Encycl. Méth. pl. 291. fig. 4 *a, b, c, d.*

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

E 277. The *Tellina solidula*, Solander?

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 304.

Hab. Britain.

Hunterian.

E 278. The *Tellina radiata*, Linn.

Fig. Encycl. Méth. pl. 289. fig. 2.

Hab. Atlantic Ocean.

Some of the specimens exhibit the perforations of a carnivorous mollusc.

Presented by Lord Valentia.

- E 279. The *Tellina crassa*, Penn. (*Arcopagia*, Brown.)
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 288.
Hab. Britain. *Presented by Mr. J. Rowse.*
- E 280. The *Tellina carnaria*, Linn. (*Strigilla*, Turton.)
Fig. Lam. Anim. sans Vert. vol. vi. p. 209.
Hab. Antilles. *Hunterian.*
- E 281. The *Tellina maculosa*, Lam.
Fig. Lam. Anim. sans Vert. vol. vi. p. 188.
Hab. Indian Ocean. *Hunterian.*
- E 282. The *Tellina Tonganensis*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, pl. 81. fig. 13.
Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 283. The *Tellina punicea*, Born.
Fig. Lam. Anim. sans Vert. vol. vi. p. 196.
Hab. Britain. *Hunterian.*
- E 284. The *Tellina tenuis*, Lam.
Fig. Lam. Anim. sans Vert. vol. vi. p. 197.
Hab. British Seas. *Hunterian.*

Genus *PSAMMOBIA*, Lam. The Sunset Shell.

The species of *Psammobia* are widely distributed, and range from the littoral zone to 100 fathoms in depth. The fossil species are found in the Tertiary strata.

- E 285. The *Psammobia Feroensis*, Lam.
Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 274.
Hab. Deep water, coast of Devon. *Presented by Mr. J. Rowse.*
- E 286. The *Psammobia lineolata*, Gray.
Fig. Reeve, Conch. Icon. pl. 8. fig. 58.
Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 287. The *Psammobia livida*, Lam.*Fig.* Lam. Anim. sans Vert. vol. vi. p. 178.*Hab.* Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*E 288. The *Psammobia rugosa*, Lam.*Fig.* Encycl. Méth. pl. 231. figs. 3, 4.*Hab.* Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus SANGUINOLARIA, Lam.

The *Sanguinolaria* inhabit the Red Sea, West Indies, Indian Ocean, Australia, and Peru. The fossil species occur in the Tertiary strata.

E 289. The *Sanguinolaria livida*, Lam.*Fig.* Anim. sans Vert. vol. vi. p. 169.*Hab.* Isle of Pines. North Australia.*Presented by Capt. Sir E. Home, Bart., R.N.*Genus AMPHIDESMA, Lam. (*Semele*, Schum.)

The *Amphidesma* are rounded or oval shells, the posterior side generally folded, and flexuous; the hinge with a long internal cartilage and a short external ligament. The recent species are principally found in Australia, the Philippines, India, and Peru; the fossil occur in the Tertiary strata.

E 290. The *Amphidesma corrugata*, Sow.*Fig.* Reeve, Conch. Icon. pl. 1. fig. 4.*Hab.* Peru (coarse gravel, in 10 fathoms water).*Purchased.*E 291. The *Amphidesma luteola*, Reeve.*Fig.* Reeve, Conch. Icon. pl. 6. fig. 42.*Hab.* Brazils.*Purchased.*

Genus CUMINGIA, G. Sow.

E 292. The *Cumingia mutica*, Sow.*Fig.* Sow. Proc. Zool. Soc. 1833, p. 34.*Hab.* Chiloe.*Purchased.*

Genus SCROBICULARIA, Schum.

- E 293. The *Scrobicularia piperita*, Gmel.

Fig. Woodward, Man. of Moll. p. 312.

Hab. River Tamar.

This species inhabits the mud of tidal estuaries, and burrows vertically to five or six inches in depth. *Presented by Mr. J. Rowse.*

Genus MESODESMA, Deshayes.

- E 294. The *Mesodesma striata*, Gmel.

Fig. Deshayes, Encycl. Méth. Vers, vol. ii. p. 443.

Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 295. The *Mesodesma (Donacilla) donacium*, Lam.

Fig. Reeve, Conch. Icon. pl. 2. fig. 11.

Hab. Chili. *Purchased.*

- E 296. The *Mesodesma spissa*?, Reeve.

Fig. Conch. Icon. pl. 3. fig. 18?

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus DONAX, Linn.

The *Donax* is a trigonal or wedge-shaped shell, with the anterior side produced, and the posterior short and truncated. The species are widely distributed, inhabiting the northern and tropical seas. The fossil forms occur in the Tertiary strata.

- E 297. The *Donax scortum*, Linn.

Fig. Deshayes, Encycl. Méth. Vers, t. ii. p. 95.

Hab. Indian Ocean. *Hunterian.*

- E 298. The *Donax cuneata*, Linn.

Fig. Encycl. Méth. pl. 261. fig. 5.

Hab. Indian Ocean. *Hunterian.*

E 299. The *Donax australis*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, tab. 81. fig. 20.

Hab. Bay of Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 300. The *Donax trunculus*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 338.

Hab. Mediterranean. *Presented by Mr. J. Rowse.*

E 301. The *Donax scalpellum*, Gray.

Fig. Reeve, Conch. Icon. pl. 6. fig. 39.

Hab. Gulf of California. *Presented by Lord Valentia.*

E 302. The *Donax denticulata*, Linn.

Fig. Encycl. Méth. pl. 262. fig. 7 *a, b, c.*

Hab. Britain. *Presented by Mrs. Robinson.*

Genus GALATÆA, Brug. (*Potamophila*, Sow., *Megadesma*, Bowd.)

The *Galatææ* are restricted to the rivers of Africa.

E 303. Two specimens of *Galatæa radiata*, Lam.

Fig. Anim. sans Vert. vol. vi. p. 284.

Hab. Senegal. *Purchased.*

Family Solenidæ.

The Razor-fishes, so called from the peculiar shape of their shells, which are transversely elongated, and have sharp edges. The animal is furnished with short, fimbriated, and generally united siphons, and the foot is greatly developed.

Genus SOLEN, Linn.

The species are widely distributed. The fossil species occur in the Tertiary strata. The Razor-fishes burrow vertically in the sand to the depth of one or two feet.

E 304. The *Solen siliqua*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 246.

Hab. Bay of Dublin.

Presented by E. Belfour, Esq.

E 305. The *Solen cultellus*, Linn.

Fig. Encycl. Méth. pl. 223. fig. 4.

Hab. Indian Ocean.

Presented by Lord Valentia.

E 306. The *Solen ensis*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 250.

Hab. Whitsand Bay, Plymouth.

Hunterian.

E 307. The *Solen truncatus*, Sow.

Fig. Sow. Genera of Shells, No. 32.

Hab. Red Sea.

Hunterian.

E 308. The *Solen vagina*, Linn.

Fig. Encycl. Méth. pl. 22. fig. 1.

Hab. Atlantic Ocean.

Hunterian.

Genus *CULTELLUS*, Schumacher.

E 309. The *Cultellus* (*Solen*) *radiatus*, Linn.

Fig. Encycl. Meth. pl. 225. fig. 2.

Hab. Indian Ocean.

Presented by Lord Valentia.

Genus *SOLECURTUS*, Blainv.

E 310. The *Solecurtus coarctatus*, Gmelin.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 259.

Hab. Plymouth.

Presented by Mr. J. Rowse.

E 311. The *Solecurtus strigillatus*, Linn. sp.

Fig. Encycl. Méth. pl. 224. fig. 3.

Hab. South Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

E 312. The *Solecurtus*, or (*Novaculina*) *gangetina*, Benson.

Fig. Woodward's Mollusca, p. 316.

Hab. Calcutta.

Presented by Lord Valentia.

Family *Myacidæ*.

Thick, strong shells, with a wrinkled epidermis, generally gaping posteriorly, and sometimes anteriorly ; pallial line sinuated.

Genus *MYA*, Linn. Gaper Shell.

Shell inequivalve, gaping at both ends ; valves united by a ligament inserted into a spoon-shaped process.

E 313. The *Mya truncata*, Linn. One specimen, with the epidermal portion of the combined siphons preserved.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 163.

Hab. Britain. An abundant and widely diffused species, living both in the littoral zone and the deep sea.

Presented by Mrs. Robinson.

E 314. The *Mya arenaria*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 168.

Hab. Britain.

Presented by Mrs. Robinson.

Genus *CORBULA*, Bruguière.

The *Corbulæ* are generally solid shells, inequivalve, the two valves differing from each other in their general sculpture. They are marine.

E 315. The Kernel Corbula (*Corbula nucleus*, Lam.). This species, which is the only representative of the genus on the British coasts, is also found in the Mediterranean ; but the specimens are generally of smaller size.

Fig. Lam. Anim. sans Vert. vol. vi. p. 139. Encycl. Méth. pl. 230. fig. 4.

Hab. Coasts of Britain. Mediterranean.

Presented by Mr. J. Rowse.

E 316. The *Corbula nuciformis*, Sow.

Fig. Proc. Zool. Soc. 1833.

Hab. West Columbia.

Purchased.

- E 317. The *Corbula bicarinata*, Sow.

Fig. Proc. Zool. Soc. 1833.

Hab. West Columbia, in sandy mud, from 7 to 17 fathoms.

Purchased.

- E 318. Four specimens of *Corbula Zeylandica*.

Fig. Quoy, Voyage de l'Astrolabe, tab. 85. figs. 12-14.

Hab. Southern Seas. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 319. Two left valves of *Corbula sulcata*, Lam.

Fig. Anim. sans Vert. vol. vi. p. 138. Encycl. Méth. pl. 230. fig. 1.

Hab. Senegal.

A thick irregular shell, with the ribs nearly as broad as the furrows.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *PANOPÆA*, Men. de la Groye.

- E 320. The *Panopæa Aldrovandi*, Lam.

Fig. Blainville, Malac. pl. 80. fig. 2.

Hab. Mediterranean.

In this specimen the deep muscular impressions, pallial line and sinus are well defined.

Hunterian.

- E 321. A single large right valve of the *Panopæa Aldrovandi*, Lam., the interior and exterior surface being covered with oysters.

Hab. Mediterranean. *Presented by Sir J. Banks, F.R.S.*

- E 322. A single right valve of the *Panopæa Aldrovandi*, showing the muscular impressions and pallial line.

Hab. Mediterranean. *Purchased.*

Genus *SAXICAVA*, Bellevue.

- E 323. The *Saxicava rugosa*, Linn. A very variable species, according to the localities in which it is found. It occurs in holes of rocks and corals, and burrowing in limestone and other submarine bodies. This species is

widely distributed—in the Arctic, Mediterranean and British Seas, also at the Canaries and the Cape: it ranges in depth from low-water to 140 fathoms. This species is also found fossil in the Upper Tertiary strata.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 146.

Hab. The Plymouth Breakwater. *Presented by Mr. J. Rowse.*

Family *Anatinidæ*.

The *Anatinidæ* are generally oblong, fragile shells, tumid, sometimes compressed; inequivalve, and gaping at the posterior end. The animals have closed mantles, except a small opening for the passage of the linguiform foot; the siphons are long, separate, and furnished with fringed orifices. They have a wide vertical range, extending from the littoral zone to great depths.

Genus *THRACIA*, Blainv.

E 324. The *Thracia pubescens*, Pult.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 226.

Hab. South coast of Britain. *Presented by Mr. J. Rowse.*

Genus *LYONSIA*, Turton.

E 325. The *Lyonsia cuneata*, Gray.

Fig. Wood's Cat. of Shells (Supplement).

Hab. Peru. *Purchased.*

Genus *PANDORA*, Brug.

E 326. A species of *Pandora* allied to *P. rostrata*, Lam.

Hab. Brazils. *Purchased.*

Genus *MYADORA*, Gray.

The ten species are restricted to New Zealand, Australia, and the Philippines.

E 327. The *Myadora striata*, Desh.

Fig. Woodward, Manual of Mollusca, p. 243.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus MYOCHAMA, Stutchbury.

E 328. The *Myochama anomioides*, Stutchb.

Fig. Woodward, Manual of Mollusca, p. 243.

Hab. New South Wales.

One specimen attached to *Trigonia pectinata*, and two specimens attached to *Crassatella pulchra*. *Purchased.*

Genus CHAMOSTRÆA, Roissy (*Cleidothærus*, Stutchb.).

E 329. The *Chamostræa albida*, Lam. (*Cleidothærus chamoides*, Sow.)

Fig. Sow. Genera of Shells, figs. 1-3.

Hab. New South Wales.

Purchased.

Family Gastrochænidæ.

Equivalve, oblong shells, generally gaping. The animals have the siphons long, nearly united to their extremities, and the openings furnished with cirrhi.

Genus GASTROCHÆNA, Spengler.

The *Gastrochænæ* are perforating shells, burrowing somewhat regular holes into limestone and submarine bodies. The species are widely distributed: the fossil species range from the Oolitic to the Tertiary strata.

E 330. The *Gastrochæna modiolina*, Lam.

Fig. Sow. Genera of Shells, No. 11. figs. 1, 2.

Hab. In soft earthy limestone, Malta.

Purchased.

Genus CLAVAGELLA, Lam.

The species inhabit the Mediterranean and Pacific, and Australia.

E 331. The *Clavagella aperta*, Sow.

Fig. Sow. Genera of Shells, No. 13.

Hab. Malta, imbedded in soft earthy limestone.

Purchased.

Genus ASPERGILLUM, Lam.

The species occur in the Red Sea, Australia, and Java.

E 332. The *Aspergillum Javanum*, Lam.

Fig. Lam. Anim. sans Vert. vi. p. 20.

Hab. Indian Ocean.

Purchased.

E 333. The *Aspergillum Javanum*, Lam.

Purchased.

E 334. The *Aspergillum* (*Clepsydra*, Schum.) *vaginiferum*, Lam.

Fig. Lam. Anim. sans Vert. vi. p. 21.

Hab. Red Sea.

Hunterian.

Family *Pholadidæ*.

The *Pholadidæ* are acephalous molluscs, having an equivalve, inequilateral shell, and more or less gaping. They have no true hinge, and are furnished with a curved calcareous process beneath the beak of each valve, and in some genera with accessory valves or plates, more or less developed, at the back of the shell. The animals have more or less elongated bodies produced into a siphonal tube, divided at its extremity, and having the opening cirrhatated or fringed.

They are all borers, and perforate wood, stone, clay, and other substances.

Genus PHOLAS, Linn. The Piddock.

Shell elongate, somewhat cylindrical, with two accessory valves on the dorsal margin for the protection of the umbonal muscle.

The recent species are widely distributed ; the fossil species occur in the Tertiary strata.

E 335. The *Pholas costata*, Linn.

Fig. Encycl. Méth. pl. 169. figs. 1, 2.

Hab. West Indies, &c.

This species is sold in Havannah as an article of food.

Hunterian.

- E 336. The *Pholas Chilensis* (*P. orientalis*?), Gmel.

Fig. Encycl. Méth. pl. 168. fig. 10.

Hab. Chiloe.

Purchased.

- E 337. The *Pholas crispata*, Linn. (*Zirfæa*, Leach.) One large valve, four small and perfect specimens, and one specimen in chalk, the fractured portions of the chalk showing sections of the perforations with the transverse rugose striæ, produced by the burrowing of the mollusc. In this species the umbonal shield is not distinctly calcified.

Fig. Encycl. Méth. pl. 169. figs. 5-7.

Hab. Seas of Europe.

Hunterian.

- E 338. The *Pholas candida*, Linn.

Fig. Encycl. Méth. pl. 168. fig. 11.

Hab. Seas of Europe.

In this species the umbonal shield is single, and no dorsal plate.

Presented by Mrs. Robinson.

- E 339. The *Pholas dactylus*, Linn.

Fig. Encycl. Méth. pl. 168. figs. 2-4.

Hab. Coast of England, Sussex, Devon, &c.

In this species the umbonal muscle is protected by two valves, with a posterior transverse plate and a long symmetrical plate over the dorsal region.

This species, the 'Common Piddock,' is frequently used as a bait on the south coast of England.

Hunterian.

Genus PHOLADIDEA, Turton.

- E 340. The *Pholadidea* (*Martesia*) *striata*, Linn. (*Pholas clavata*, Lam.) Two specimens, perforated into a piece of wood, and showing the umbonal valve and the narrow accessory dorsal valve.

Fig. Lam. Anim. sans Vert. vi. p. 46.

Hab. Locality unrecorded.

Presented by Sir W. Blizard.

- E 341. Five specimens of *Pholadidea* (*Martesia*, Leach) *striata*, Linn., perforated into a piece of hard cedar, and across the grain of the wood.

Hab. Locality unknown.

Presented by Mrs. Robinson, Sept. 1823.

Genus XYLOPHAGA, Turton.

The animal of *Xylophaga* generally bores across the grain of floating wood or timber covered by the sea.

E 342. The *Xylophaga dorsalis*, Turton.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 90.

Hab. Valparaiso. This species also occurs on the British coasts.

Presented by Mrs. Robinson.

Genus TEREDO, Adanson.

E 343. The *Teredo Norvegica*, Spengler, and its calcareous tubes.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 67. pl. 4. figs. 1-5.

Hab. British coasts.

Presented by Mrs. Robinson.

E 344. The valves and shelly tube of *Teredo navalis*, Linn.

Fig. Lam. Anim. sans Vert. vol. vi. p. 38.

Hab. Locality unrecorded.

Hunterian.

E 345. A long piece of wood perforated by the *Teredo navalis*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. i. p. 74.

Hab. British coasts.

Presented by Capt. Sir E. Home, Bart., R.N.

E 346. A part of the false keel of the ship 'Sutlej' perforated by the *Teredo*.

Presented by C. F. White, Esq.

E 347. A long and irregular portion of the shelly tube of a *Teredo*.

Hab. Wellington, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 348. Various specimens of the *Teredo (Furcella) arenaria*, Rumph. sp.

Fig. *Solen arenarius*, Rumph. Mus. pl. 41. figs. D, E. *Septaria arenaria*,

Lam. Anim. sans Vert. vi. p. 33. *Serpula polythalamia*, Linn. Syst.

Nat. p. 1269. *Teredo gigantea*, Home, Phil. Trans. 1806, p. 276.

pls. 10-12. figs. 2-7.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

E 349. The shell of the *Teredo arenaria*, Rumph., measuring 4 feet, showing the double tube at the narrow end.

a. Three portions of the same.

b. Four longitudinal sections of the same, showing the structure of the shells.

c. The terminal portion of the shell with the double tube, as figured in Sir E. Home's 'Lectures on Comparative Anatomy,' tab. 41. fig. 1.

d. Two portions of the same, showing the transverse sections of the double tube.

e. Two longitudinal sections, showing also sections of the commencement of the double tube.

f. A transverse section of a thick portion of the shell, cut and polished, exhibiting the radiating prismatic structure.

g. A longitudinal section, showing the irregularities on the internal surface of the tube, the effect probably of injury or disease; this specimen resembling that figured in Sir E. Home's 'Lectures on Comparative Anatomy,' tab. 42. fig. 7.

h. A portion of the shell, showing the manner in which the animal closes the tube, with transverse septa, at certain periods of growth.

i. The pallets of the *Teredo*, which are attached to the base of the tube.

These shells were found after a very violent earthquake that occurred in the island of Sumatra in the year 1797, and were procured by J. Griffiths, Esq., in a small sheltered bay, with a muddy bottom, surrounded by coral reefs, on the island of Battoo, distant from the coast of Sumatra about twenty leagues; upon the sea receding from the bay, after the inundation, they were seen protruding from a bank of slightly indurated mud, and two or three broken specimens were obtained. They were also found in another inlet of the sea, sticking out of rather hard mud, mixed with small stones, sand, &c., from 8 to 10 inches or more, and from 1 to 3 fathoms under water; they were standing in different directions, and separate from each other. The length of the longest of these shells was 5 feet 4 inches, and the circumference at the base 9 inches, tapering upwards to $2\frac{1}{2}$ inches. The large end was completely closed, had a rounded appearance, and at this part was very thin.—(*Vide* Phil. Trans. 1806, pp. 269, 270.)

Class V. PTEROPODA.

The Pteropods are delicate pelagic animals, of lower organization than the Gasteropoda. They abound both in the tropical and Arctic seas, forming in the latter locality the principal food of the Whale. These Molluscs are furnished with a pair of fins, which are developed from the sides of the neck, and sometimes combined with the rudimentary foot and tentacles. They are either shell-less, or provided with a glassy, translucent, and symmetrical shell, which is conical, ventricose, or spirally coiled. The recent species are widely distributed: the fossil species occur in the Tertiary strata, and there are some forms which have been referred to this class found in the Palæozoic strata.

Section A. THECOSOMATA.

Animal furnished with an external shell; head indistinct.

Family *Hyaleidæ*.

Shell symmetrical, straight or curved.

Genus *HYALEA*, Lam.

The *Hyaleæ* are more or less globular transparent shells, with the dorsal portion produced into a hood, and with a contracted aperture.

E 350. The *Hyalea tridentata*, Lam.

Fig. Woodward, Manual of Mollusca, p. 204.

Hab. Taken in a towing-net 150 miles east of Port Jackson.

Presented by Capt. Sir E. Home, Bart., R.N.

E 351. The *Hyalea uncinata*, Rang.

Fig. D'Orb. Voy. dans l'Amér. Mérid. pl. 5. figs. 11-15.

Hab. East coast of New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 352. The *Hyalea longirostris*, Lesueur.

Fig. Quoy et Gaim. Voy. de l'Astrolabe, t. ii. p. 380. pl. 27. figs. 20-24.

Hab. Coast of New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 353. The *Hyalea trispinosa*, Lesueur (*Diacria*, Gray).

Fig. Quoy et Gaim. Voy. de l'Astrolabe, t. ii. p. 378. pl. 27. figs. 17-19.

Hab. South Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 354. The *Hyalea inflexa*, Lesueur.

Fig. Lam. Anim. sans Vert. vol. vii. p. 422.

Hab. Taken in a towing-net on the east coast of New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus CLEODORA, Peron and Lesueur.

Shell triangular and transversely striated; the ventral side nearly flat, dorsal keeled; aperture simple, with the angles somewhat produced. The genus *Cleodora* is widely distributed: the fossil species occur in the later Tertiary deposits.

E 355. The *Cleodora lanceolata*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 27. figs. 6-13.

Hab. South Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus CHELETROPIS, Forbes.E 356. The *Cheletropis Huxleyi*, Forbes.

Fig. Woodward's Mollusca, p. 207.

Hab. This species is very abundant and common across the ocean from New Zealand, floating on the surface. The specimens were taken in 1846, off the coast of New South Wales, in lat. 54° S., long. 151° E.

This shell has been provisionally arranged under the Pteropoda; but,

according to some naturalists the animal is more nearly allied to the *Muricidæ*, and by others to the *Dentaliadæ*.

Presented by Capt. Sir E. Home, Bart., R.N.

Section B. GYMNOSOMATA.

Animal shell-less ; head distinct ; fins lateral.

Family *Clidæ*.

The *Clidæ* have fusiform bodies, with a small and distinct foot ; the tentacle of the head sometimes furnished with suckers.

Genus *CLIO*, Müller.

E 357. The *Clio borealis*, Brug.

Fig. Encycl. Méth. pl. 75. figs. 3, 4.

Hab. Arctic Seas.

Presented by Sir James Ross.

Class VI. GASTEROPODA.

The animals of this division have a distinct head ; and the under side of the body forms a flat, broad, fleshy disc, upon which the animal moves, and hence the name of this class. They are either naked, or protected by a shell, which consists either of a single piece more or less spirally turned, as in the univalve Mollusca, or of many pieces, as in the *Chitonidæ* or multivalve Mollusca.

In this class the respiration is either aquatic, and performed by means of gills, as in the ordinary Sea Snails, or they breathe air, as the Land Snails and other freshwater Mollusca.

This class is divided into four orders, the *Nucleobranchiata*, *Opisthobranchiata*, *Pulmonifera*, and *Prosobranchiata*.

Order I. NUCLEOBRANCHIATA.

The Nucleobranchs are pelagic Molluscs, generally floating on the surface of the sea. They are either shell-less, as *Firola*, or with large bodies and

small shells, as *Carinaria*, or with shells, as *Atlanta*, into which the animal can retire and close with an operculum. They swim rapidly by the vigorous movements of their fin-like tails or by a fan-shaped ventral fin, and adhere to sea-weed by a small sucker placed on the margin of the latter.

Family *Firolidæ*.

Genus *CARINARIA*, Lam.

E 358. The *Carinaria Mediterranea*, Sow.

Fig. Sow. Genera of Shells, no. 34.

Hab. Mediterranean.

Purchased.

Family *Atlantidæ*.

Genus *ATLANTA*, Lesueur.

A glassy minute shell, compressed and prominently keeled dextrally; spiral aperture narrow, deeply notched at the keel.

E 359. The *Atlanta Peronii*, Lesueur.

Fig. Woodward's Mollusca, p. 200.

Hab. South Atlantic.

Presented by Capt. Sir E. Home, Bart., R.N.

Order II. OPISTHOBRANCHIATA.

In this order the shell is thin, and usually rudimentary or wanting, and is wholly or partially covered by the animal. The gills are exposed either in tufts, or branching on the back and sides of the animal towards the posterior part of the body, and not enclosed in a special cavity. The sexes are united.

Section A. NUDIBRANCHIATA.

Animal destitute of a shell, except in the young state; gills external, placed on the back and sides of the body.

Family *Æolidæ*.

Gills lengthened, papillose, arranged along the sides of the back ; tentacles not retractile, and without sheaths.

Genus *ÆOLIS*, Cuvier.

E 360. A species of *Æolis*, mounted in a cell.

Hab. Britain.

Prepared by Mr. H. Goadby.

Family *Tritoniadæ*.

Gills simple or plumose, arranged along the sides of the back ; tentacles retractile into sheaths.

Genus *TRITONIA*, Cuvier.

E 361. A species of *Tritonia*.

Hab. Britain.

Prepared by Mr. H. Goadby.

Family *Doridæ*.

Gills plumose, ranged in a circle on the middle of the back ; tentacles two ; skin strengthened by calcareous spicula, imbedded in its substance.

Genus *DORIS*, Linn.

E 362. The *Doris tuberculata*, Cuv.

Fig. Cuv. Anim. du Mus. vol. iv. p. 469. pl. 2. fig. 5.

Hab. British Seas.

Prepared by Mr. H. Goadby.

Section B. TECTIBRANCHIATA.

Animal usually provided with a shell, which is either enclosed or external ; gills covered by the shell or mantle.

Family *Pleurobranchidæ*.

Shell thin, enclosed within the substance of the mantle ; gills plumose, lateral.

Genus *PLEUROBRANCHUS*, Cuvier.

E 363. The *Pleurobranchus membranaceus*, Mont.

Fig. Reeve, Conch. Syst. pl. 154.

Hab. Britain.

Purchased.

Genus *UMBRELLA*, Lam.

E 364. The Chinese Umbrella Shell, *Umbrella umbellata*, Gmel. (*U. indica*, Lam.)

Fig. Lam. Anim. sans Vert. vol. vii. p. 573.

Hab. Mauritius.

Hunterian.

Family *Aplysiadæ*.

Shell wanting, or rudimentary, and enclosed in the mantle; gills plumose, concealed.

Genus *APLYSIA*, Gmelin.

E 365. The Sea Hare, *Aplysia depilans*, Linn.

Fig. Lam. Anim. sans Vert. vol. vii. p. 688.

Hab. Britain. Mediterranean.

Prepared by Mr. H. Goadby.

Genus *DOLABELLA*, Lam.

E 366. The Hatchet Shell, *Dolabella Rumphii*, Cuvier.

Fig. Lam. Anim. sans Vert. vol. vii. p. 699.

Hab. Indian Ocean.

Presented by John Quekett.

Family *Bullidæ*.

Shell globose, cylindrical convolute, more or less covered by the animal, with a small or concealed spire; no operculum.

The *Bullidæ* are animal feeders, and the recent species are widely distributed.

Genus BULLA, Lam.

- E 367. The *Bulla ampulla*, Linn.

Fig. Encycl. Méth. pl. 358. fig. 3.

Hab. Indian Ocean.

Hunterian, and presented by Lord Valentia.

- E 368. The *Bulla australis*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 26. figs. 38, 39.

Hab. Port Royal Harbour, King George's Sound.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 369. The *Bulla fasciata*, Brug. (*B. velum*, Gmel.)

Fig. Encycl. Méth. pl. 359. fig. 1.

Hab. Indian Ocean.

Hunterian.

- E 370. The *Bulla lignaria*, Linn. (*Scaphander*, Montf.)

Fig. Encycl. Méth. pl. 359. fig. 3.

Hab. Britain.

Hunterian.

- E 371. The *Bulla naucum*, Linn. (*Atys*, Montf.)

Fig. Encycl. Méth. pl. 359. fig. 5.

Hab. Indian Ocean.

Hunterian.

- E 372. The *Bulla physis*, Linn.

Fig. Encycl. Méth. pl. 359. fig. 4.

Hab. Indian Ocean.

Hunterian.

- E 373. The *Bulla aplustre*, Linn. (*Aplustrum*, Schum.)

Fig. Encycl. Méth. pl. 359. fig. 2.

Hab. Indian Ocean.

Hunterian.

- E 374. The *Bulla aperta* (*Bullæa*, Lam.).

Fig. Sow. Genera of Shells, fig. 1.

Hab. Britain.

Hunterian.

Family *Tornatellidæ*.

Shell external, convolute, subcylindrical ; aperture long and narrow ; columella plaited.

This family includes both recent and fossil genera, the latter chiefly occurring in the Cretaceous strata.

Genus *TORNATELLA*, Lam.

E 375. The *Tornatella solidula*, Linn.

Fig. Lam. Anim. sans Vert. vol. ix. p. 40.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

Order III. PULMONIFERA.

This order includes both the land and freshwater Mollusca which breathe air. The animal has usually a large shell, and is provided with a broad foot, as in the ordinary Gasteropods. In some forms, as the Slugs, the shell is small and concealed.

The respiration is effected by a form of lung consisting of a vascular network, resembling somewhat the gills of the Sea Snails.

The greater part of the pulmoniferous gasteropods are terrestrial ; others are aquatic, but chiefly inhabit fresh water, and occasionally rise to the surface in order to breathe air.

This order comprises two divisions : in the one the animal is furnished with an operculum—the Operculata ; in the other division this is absent—the Inoperculata.

Section A. OPERCULATA.

Shell spiral ; animal provided with an operculum.

Family *Cyclostomidæ*.

Shell spiral, striated ; aperture nearly circular ; operculum spiral. Animal with eyes at the outer base of the tentacles ; tentacles contractile.

Genus CYCLOSTOMA, Lam.

Shell spiral, striated ; aperture nearly circular ; operculum spiral.

E 376. The *Cyclostoma oculus*, Sow.

Fig. Sow. Thesaur. Conch. fig. 96.

Hab. Java.

Purchased.

E 377. The *Cyclostoma elegans*, Müller.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 201.

Hab. Britain.

Hunterian.

E 378. The *Cyclostoma involvulus*, Sow.

Fig. Sow. Thesaur. Conch. pl. 26.

Hab. India.

Hunterian.

Genus CYCLOPHORUS, Montfort.

Shell depressed, umbilicated ; aperture circular ; peristome continuous ; operculum horny, multispiral.

E 379. The *Cyclophorus (Cataulus) Austenianus*, and spiral operculum.

Fig. Benson, Ann. Nat. Hist. vol. xii. (1853).

Hab. Ceylon.

Presented by E. L. Layard, Esq.

Genus HELICINA, Lam.

Shell globose, sometimes keeled, callous beneath ; aperture semilunar ; peristome expanded ; operculum shelly or membranous.

E 380. The *Helicina major*, Gray.

Fig. Lam. Anim. sans Vert. vol. viii. p. 162.

Hab. Jamaica.

Purchased.

E 381. Two specimens of *Helicina*, n. sp.

Hab. Granada.

Purchased.

Section B. INOPERCULATA.

Shell spiral ; animal without an operculum.

Family *Auriculidæ*.

The Ear-Shells are spiral, with a short spire and a large body-whorl, and an elongated aperture, which is denticulated. Animal with two tentacles, having the eyes sessile, and placed behind them.

Genus *AURICULA*, Lam.

E 382. The Midas Ear-Shell, *Auricula Midæ*, Lam.

Fig. Lam. Anim. sans Vert. vol. viii. p. 323.

Hab. East Indies.

Purchased.

E 383. The *Auricula* (*Scarabus*, Montf.) *scarabæus*, Gmel.

Fig. Lam. Anim. sans Vert. vol. viii. p. 327.

Hab. East Indies.

Purchased.

E 384. A species of *Auricula* allied to *A. Australis*, Quoy, forming the genus *Marinula* of King.

Hab. West Columbia.

Purchased.

Genus *CONOVULUS*, Lam. (*Melampus*, Montf.)

E 385. The *Conovulus luteus*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 13. figs. 25-27.

Hab. Wallis's Island.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Limnæidæ*.

Shell thin, horn-coloured, with a simple aperture and sharp outer margin.

Animal with the eyes sessile, at the inner base of the tentacles.

The *Limnæidæ* inhabit freshwater streams in most parts of the world.
Fossil species occur in the Wealden and Tertiary fluviatile deposits.

Genus LIMNÆA, Lam.

- E 386. The *Limnæa stagnalis*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 174.

Hab. Common in freshwater ponds, Wandsworth, &c. *Hunterian.*

- E 387. The *Limnæa palustris*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 180.

Hab. Battersea, &c. *Presented by Mr. J. Rowse.*

- E 388. The *Limnæa pereger*, Müller.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 165.

Hab. Britain. *Presented by Mr. J. Rowse.*

- E 389. The *Limnæa truncatulus*, Müller.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 177.

Hab. Plymouth. *Presented by Mr. J. Rowse.*

- E 390. The *Limnæa auricularia*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 169.

Hab. Britain. *Hunterian.*

Genus CHILINIA, Gray.

The species inhabit clear running streams in South America. One fossil species occurs in the Miocene deposits of Patagonia.

- E 391. A species allied to *Chilinia ampullacea*.

Hab. South America. *Purchased.*

Genus ANCYLUS, Geoffroy.

The River Limpets inhabit running streams in Europe, North and South America, and Madeira. The fossil forms occur in the Eocene strata.

- E 392. The *Ancylus fluviatilis*, Müller.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 186.

Hab. Britain. *Presented by Mr. J. Rowse.*

Genus *PLANORBIS*, Müller.

The sixty living species are distributed in Europe, North America, India, and China. The fossil forms are found in the Wealden and Tertiary fluviatile strata.

E 393. The *Planorbis corneus*, Drap.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 147.

Hab. Britain.

Presented by Mrs. Robinson.

E 394. The *Planorbis carinatus*, Müll.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 183.

Hab. Britain.

Presented by Mr. J. Rowse.

E 395. The *Planorbis glaber*, Jeffreys.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 150.

Hab. Britain.

Presented by Mr. J. Rowse.

E 396. The *Planorbis (Segmentina) lacustris*, Lightfoot.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 162.

Hab. West Ham.

In this shell the volutions are contracted internally by periodic septa with triradiate openings.

Presented by Mr. J. Rowse.

Genus *PHYSA*, Draparnaud.

The recent species are widely distributed ; the fossil species occur in the Wealden and Tertiary strata.

E 397. The *Physa fontinalis*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 140.

Hab. Surrey Canal.

Presented by Mr. J. Rowse.

E 398. The *Physa (Aplexa, Fleming) hypnorum*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 143.

Hab. New River.

In this species the mantle margin is plain, in the former it is fringed with long filaments and expanded.

Presented by Mr. J. Rowse.

Family *Limacidæ*.

Shell small, internal, or partly covered by the mantle. Animal with four retractile tentacles, the upper pair bearing the eyes.

Genus *TESTACELLA*, Cuv.

Shell small, ear-shaped, situated at the posterior part of the body.

E 399. The *Testacella Maugei*, Fér.

Fig. De Fér. Moll. Terr. p. 94. pl. 8. figs. 10-12.

Hab. Canary Islands.

Purchased.

Family *Helicidæ*.

Shell external, spiral, enclosing the entire animal. Tentacles four, retractile, the longest pair bearing eyes at their extremity.

Genus *CLAUSILIA*, Draparnaud.

E 400. The *Clausilia valida*, Pfr.

Fig. Reeve, Conch. Icon.

Hab. China.

Hunterian.

E 401. The *Clausilia biplicata*, Turton.

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 118.

Hab. Britain.

Presented by John Morris, F.G.S.

Genus *PUPA*, Lam.

E 402. The *Pupa mumia*, Lam.

Fig. Blainv. Malac. pl. 38. fig. 5.

Hab. Antilles.

Hunterian.

E 403. The *Pupa junipera*, Flem. (*P. secale*, Drap.)

Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 101.

Hab. Plymouth.

Presented by Mr. J. Rowse.

Genus *ACHATINA*, Lam.

- E 404. The *Achatina zebra*, Lam. (var.)
Fig. Lam. Anim. sans Vert. vol. viii. p. 295.
Hab. Africa. *Hunterian.*
- E 405. The *Achatina variegata*, Fab. Col. (*A. perdix*, Lam.)
Fig. Lam. Anim. sans Vert. vol. viii. p. 294.
Hab. South America. *Hunterian.*
- E 406. The *Achatina reticulata*, Pfr.
Fig. Reeve, Conch. Icon.
Hab. China. *Presented by W. Lockhart, Esq., F.R.C.S.E.*

Genus *BULIMUS*, Scopoli.

Shell ovate or oblong, turreted, with ventricose whorls; columella straight, sometimes with one or more plaits; aperture generally entire, margin either simple or reflected.

- E 407. The *Bulimus ovatus*, Brug. (var. *granulosus*). The epidermis is finely granulated on the earlier volutions, and on the last whorl the epidermis is wrinkled.
Fig. Reeve, Conch. Icon. pl. 36. fig. 212.
Hab. Brazil. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 408. Three specimens of *Bulimus Mindoroensis*, Broderip.
Fig. Reeve, Conch. Icon. pl. 4. fig. 15.
Hab. Philippine Islands. *Presented by R. P. Napper, Esq.*
- E 409. Two specimens of *Bulimus phasianellus*, Valenciennes. On one of the shells the spotted markings are distinctly shown; the larger specimen is of a paler colour and more corrugated, especially near the suture. The animal is said to yield a purple fluid.
Fig. Reeve, Conch. Icon. pl. 15. fig. 88 (*B. iostoma*, Sow.).
Hab. Chili and Peru. *Purchased.*

- E 410. Three specimens of *Bulimus rufogaster*, Lesson.
Fig. Reeve, Conch. Icon. pl. 1. fig. 4.
Hab. Island of Luzon, in dark and lofty forests.
Presented by R. P. Napper, Esq.
- E 411. Three specimens of *Bulimus pythogaster*, Fér.
Fig. Reeve, Conch. Icon. pl. 1. fig. 2.
Hab. Philippine Islands. *Presented by R. P. Napper, Esq.*
- E 412. *Bulimus Peruvianus*, Brug., and a variety of the same species.
Fig. Reeve, Conch. Icon. pl. 17. fig. 101.
Hab. Chili. *Purchased.*
- E 413. The *Bulimus distortus*, Brug. (*Plekocheilus*, Beck.)
Fig. Reeve, Conch. Icon. pl. 54. fig. 358.
Hab. Granada. *Purchased.*
- E 414. The *Bulimus Broderipii*, Sow. Three specimens of a smaller variety.
Fig. Sow. Proc. Zool. Soc. 1832, p. 30.
Hab. Chili and Peru. *Purchased.*
- E 415. The *Bulimus versicolor*, Brod.
Fig. Brod. Proc. Zool. Soc. 1832, p. 108.
Hab. Casma, Peru, from bushes on the mountains. *Purchased.*
- E 416. The *Bulimus Chilensis*, Lesson.
Fig. Lesson, Voy. de la Coquille, pl. 8. fig. 3.
Hab. Concepcion and Valparaiso, Chili. *Purchased.*
- E 417. A variety of *Bulimus sordidus*, Lesson (*B. proteus*, Brod.). A variable species and largely umbilicated, the last whorl closely granulated.
Fig. Reeve, Conch. Icon. pl. 17. fig. 100.
Hab. Mountains of Peru, under stones. *Purchased.*
- E 417A. The *Bulimus citrinus*, Brug.
Fig. Reeve, Conch. Icon. pl. 31. fig. 187.
Hab. Moluccas. *Presented.*

- E 418. The *Bulimus zebra*, Müller (*B. undatus*, Brug.). A widely distributed species, and presenting a variety of aspects according to locality. It is the *B. ziczac* of Lam., and *B. princeps*, Sow.
Fig. Reeve, Conch. Icon. pl. 15. fig. 90.
Hab. Panama, West Indies, Brazil, &c. *Hunterian.*
- E 419. The *Bulimus acutus*, Müller, sp.
Fig. Reeve, Conch. Icon. pl. 66. fig. 467.
Hab. Whitsand Bay, Ireland, Spain, Portugal. *Hunterian.*
- E 420. The *Bulimus Shongii*, Lesson.
Fig. Voy. de la Coquille, Moll. p. 321. pl. 7. figs. 4, 5.
Hab. Bay of Islands, New Zealand. *Presented by David Maclaurin, Esq.*
- E 421. The *Bulimus Bairdii*, Reeve.
Fig. Reeve, Conch. Icon. pl. 43. fig. 72.
Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 422. A large thick species of *Bulimus*, with compressed volutions, and with two large callosities on the columella (*B. auris-bovinæ*, Fér.).
Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 423. The *Bulimus rosaceus*, King.
Fig. King's Zool. Journal, vol. v. p. 341.
Hab. Chili. *Purchased.*
- E 424. An individual of the same species, *B. rosaceus*, King, which was reared at Hackney, in the greenhouse of Mr. Loddiges.
- E 425. The *Bulimus trilineatus*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, vol. ii. pl. 9. figs. 1-3.
Hab. Port-Royal Harbour, King George's Sound.
Presented by Capt. Sir E. Home, Bart., R.N.

E 426. The *Bulimus Mexicanus*, Lam.

Fig. Lam. Anim. sans Vert. vol. viii. p. 232.

Hab. Mexico.

Hunterian.

Genus PARTULA, Férussac.

The *Partulæ* are allied to the *Bulimi*, and are a type of a tribe of Snails belonging to the Polynesian Islands, just south of the equator. Mr. Gould remarks, ‘No specimen of *Succinea* or *Partula*, genera so abundant in the Society and Samoa Islands, were found at the Feejees; the true *Helix* seemed to be replaced by large species of *Nanina*. On the other hand, large and peculiar species of *Bulimus* occur abundantly in the Feejees, while nothing of the kind occurs on any of the other islands. Indeed, judging from the land-shells, the Feejees are more nearly allied to the islands to the westward, such as the New Hebrides, than to the Friendly Islands on the east, though so much nearer.’

E 427. Four specimens of *Partula faba*, Sow.

Fig. Beechey's Voyage, p. 144. pl. 38. fig. 4.

Hab. Tahiti.

Purchased.

E 428. The *Partula Otaheitiana*, Reeve. A sinistral species.

Fig. Reeve, Conch. Icon. pl. 3. fig. 13.

Hab. Tahiti.

Purchased.

E 429. The *Partula hyalina*, Brod.

Fig. Reeve, Conch. Icon. pl. 3. fig. 14.

This delicate bluish-white shell, when magnified, exhibits spirally-arranged undulating impressed lines.

Purchased.

E 430. The *Partula Navigatoria*, Pfr.

Fig. Reeve, Conch. Icon. pl. 4. fig. 21.

Hab. Navigators' Island.

Presented by B. Tucker, Esq.

Genus ACHATINELLA, Swainson.

Small conical shells, consisting of six or seven volutions, with a short, callous, twisted columella, a small aperture, and simple outer lip.

This genus is the characteristic shell of the Sandwich Islands.

- E 431. The Prolonged Achatinella, *A. producta*, Reeve.
Fig. Reeve, Conch. Icon. pl. 2. fig. 13.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*
- E 432. The Subtle Achatinella, *A. vulpina*, Féruss.
Fig. Féruss. Hist. Moll. pl. 155. fig. 1.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*
- E 433. The Dark-green Achatinella, *A. prasina*, Reeve.
Fig. Reeve, Conch. Icon. pl. 4. fig. 27.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*
- E 434. The Turret Achatinella, *A. turritella*, Féruss.
Fig. Féruss. Hist. Moll. pl. 155. fig. 13.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*
- E 435. The *Achatinella ventulus*, Féruss.
Fig. Reeve, Conch. Icon. pl. 4. fig. 31.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*
- E 436. The *Achatinella lugubris*, Chemn. sp.
Fig. Chemn. Conch. Cab. vol. ii. p. 278. fig. 2059.
Hab. Sandwich Islands. *Presented by B. Tucker, Esq.*

Genus SUCCINEA, Drap.

- E 437. The Amber Shell, *Succinea putris*, Linn.
Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 132.
Hab. Britain. *Presented by Mr. J. Rowse.*

Genus VITRINA, Drap.

- E 438. A species of *Vitrina* allied to *V. Cuvierii*, Sow.
Hab. Van Diemen's Land. *Presented by Sir W. Blizard.*

Genus *HELIX*, Linn.

- E 439. The Egg Helix, *Helix ovum*, Val.
Fig. Voy. Humb. and Bonpl. vol. ii.
Hab. Philippine Islands. *Presented by R. P. Napper, Esq.*
- E 440. The *Helix Busbyi*, Gray.
Fig. Reeve, Conch. Icon. pl. 73. fig. 380.
Hab. Waimati, New Zealand. *Presented by David MacLaurin, Esq.*
- E 441. The loosely convoluted Helix, *Helix laxata*, Féruss.
Fig. Féruss. Hist. Moll. pl. 74. fig. 3.
Hab. Chili. *Purchased.*
- E 442. A bisected specimen of *Helix pomatia*, Linn., with its winter operculum, or epiphragm, by which the aperture is closed during hybernation ; it consists of hard mucus, occasionally strengthened by calcareous matter.
Hab. Kent. *Hunterian.*
- E 443. The Apple Snail, *Helix pomatia*, Linn.
Fig. Reeve, Conch. Icon. pl. 95. fig. 522.
Hab. Kent. *Presented by Prof. Owen, F.R.S.*
- E 444. The *Helix hæmastoma*, Linn.
Fig. Reeve, Conch. Icon. pl. 71. fig. 366.
Hab. Ceylon. *Presented by John Quekett.*
- E 445. The *Helix ponderosa*, Pfr.
Fig. Reeve, Conch. Icon. pl. 13. fig. 47.
Hab. Philippine Islands. *Hunterian.*
- E 446. The Sprinkled Helix, *Helix aspersa*, Müll.
Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 44.
Hab. Britain. *Hunterian.*

- E 447. The *Helix sepulchralis*, Féruss.
Fig. Féruss. Hist. Moll. pl. 75. fig. 1.
Hab. Madagascar. *Hunterian.*
- E 448. The *Helix nemoralis*, Linn.
Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 51.
Hab. Britain. *Hunterian.*
- E 449. The *Helix arbustorum*, Linn.
Fig. Forbes and Hanley, Brit. Moll. vol. iv. p. 48.
Hab. Britain. *Presented by Mrs. Robinson.*
- E 450. The *Helix acuta*, Lam. (var.).
Fig. Encycl. Méth. pl. 462. fig. 1.
Hab. Jamaica. *Hunterian.*
- E 451. A species of *Helix*, with a toothed aperture, allied to *H. aspera*, Fér.
Hab. Jamaica. *Hunterian.*
- E 452. The *Helix inversicolor*, Fér.
Fig. Reeve, Conch. Icon. pl. 40. fig. 177.
Hab. Madagascar. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 453. The *Helix sinuata*, Müller.
Fig. Reeve, Conch. Icon. pl. 51. fig. 42.
Hab. Jamaica. *Hunterian.*
- E 454. The *Helix (Carocolla) granifera*, Gray.
Fig. Gray, Proc. Zool. Soc. 1834, p. 68.
Hab. Granada. *Purchased.*
- E 455. The *Helix (Carocolla) Gualteriana*, Linn.
Fig. Reeve, Conch. Icon. pl. 151. fig. 983.
Hab. Spain. *Purchased.*

Order IV. PROSOBRANCHIATA.

Shell simple or multivalve, generally enclosing the whole animal when retracted; mantle forming a vaulted chamber over the back, in which the branchiæ are lodged; branchiæ comb-shaped or feather-shaped, situated in front of the arch. Sexes distinct.

Section A. HOLOSTOMATA.

Shell usually spiral or limpet-shaped, sometimes tubular; margin of the aperture generally entire; operculum either horny or shelly.

Family *Chitonidæ*.

Genus CHITON, Linn.

Shell multivalve, composed of imbricating plates, supported in a coriaceous mantle, which forms a more or less expanded margin round the body. The Chitons are widely distributed, and generally abound in shallow water. Fossil species occur in the Palæozoic strata.

E 456. The *Chiton magnificus*, Desh. (*C. latus*, Sow.)

Fig. Lam. Anim. sans Vert. vol. vii. p. 498.

Hab. Chili.

Presented by W. H. Baily, Esq., F.G.S.

E 457. Two specimens of *Chiton magnificus*, Desh. (*C. olivaceus*, Frembl.)

Fig. Zool. Journ. Supp. pl. 16. fig. 4.

Hab. Chili.

Purchased.

E 458. The *Chiton glaucus*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 74. figs. 7-11.

Hab. Van Diemen's Land.

Presented by Capt. Sir E. Home, Bart., R.N.

E 459. The *Chiton Coquimbensis*, Frembl.

Fig. Zool. Journ. iii. p. 197. Supp. pl. 16. fig. 2.

Hab. Coquimbo.

Purchased.

- E 460. The *Chiton granosus*, Frembl.
Fig. Zool. Journ. vol. iii. Supp. pl. 17. fig. 1.
Hab. Valparaiso. *Purchased.*
- E 461. The *Chiton Cumingii*, Frembl.
Fig. Zool. Journ. vol. iii. p. 198. Supp. pl. 16. fig. 3.
Hab. Valparaiso. *Purchased.*
- E 462. The *Chiton elegans*, Frembl.
Fig. Zool. Journ. vol. iii. p. 203. Supp. pl. 17. fig. 6.
Hab. Valparaiso. *Purchased.*
- E 463. The *Chiton lineolatus*, Frembl.
Fig. Zool. Journ. vol. iii. p. 204. Supp. pl. 17. fig. 7.
Hab. Valparaiso. *Purchased.*
- E 464. The *Chiton spiniferus*, Frembl. (*Acanthopleura*, Guilding ; *C. aculeatus*, Barnes.)
Fig. Zool. Journ. vol. iii. p. 196. Supp. pl. 16. fig. 1.
Hab. Valparaiso. *Purchased.*
- E 465. The *Chiton Peruvianus*, Lam. (*Acanthopleura*, Guilding.)
Fig. Encycl. Méth. 163. figs. 7, 8. Zool. Journ. Supp. pl. 17. fig. 4.
Hab. Valparaiso. *Purchased.*
- E 466. Six plates of a species of *Chiton*, corroded and encrusted.
Hab. Locality unrecorded. *Hunterian.*
- E 467. The *Chiton aculeatus*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, pl. 74. fig. 1.
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 468. The *Chiton fascicularis*, Linn.
Fig. Encycl. Méth. pl. 163. fig. 13.
Hab. Britain. *Presented by Mrs. Robinson.*

- E 469. The *Chiton sulcatus*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 72. fig. 31.

Hab. King George's Harbour. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 470. The *Chiton fasciatus*, Quoy (*Chitonellus*, Lam.).

Fig. Quoy, Voy. de l'Astrolabe, pl. 73. fig. 21.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 471. A large species of *Chiton*; the plates are solid and much worn.

Hab. Locality unrecorded. *Presented by Prof. Owen, F.R.S.*

- E 472. A series of specimens of the genus *Chiton*.

Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family *Dentaliadae*.

The Tooth Shells are tubular and symmetrical, open at each end, and attenuated posteriorly; they are either smooth or longitudinally striated. They are animal feeders, and range in depth from 10 to 100 fathoms, often burying themselves in sand and mud.

The Tooth Shells are widely distributed; and the fossil species occur in the Palæozoic, Secondary, and Tertiary strata.

Genus *DENTALIUM*, Linn.

- E 473. The *Dentalium entale*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. ii. p. 449.

Hab. Britain. *Hunterian.*

- E 474. The *Dentalium octogonum*, Lam.

Fig. Lam. Anim. sans Vert. vol. v. p. 344.

Hab. Seas of China. *Presented by Lord Valentia.*

- E 475. A striated species of *Dentalium*.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 475A. The *Dentalium politum*, Linn.

Fig. Desh. Mon. Dentalium, pl. 16. fig. 17.

Hab. Indian Ocean. *Hunterian.*

Family *Patellidæ*.

The Limpets are conical shells, with the apex turned forwards. The muscular impression is horseshoe-shaped, and open anteriorly.

Genus *PATELLA*, Linn.

The Rock Limpets are widely distributed. The fossil forms range from the Palæozoic to the Tertiary rocks.

E 476. The *Patella oculus*, Born, sp.

Fig. Reeve, Conch. Icon. pl. 2. fig. 2 *b*.

Hab. Cape of Good Hope.

Hunterian.

E 477. The *Patella rustica*, Linn.

Fig. Reeve, Conch. Icon. pl. 5. fig. 8.

Hab. Cape of Good Hope.

Hunterian.

E 478. The *Patella granatina*, Linn.

Fig. Reeve, Conch. Icon. pl. 3. fig. 4.

Hab. Cape of Good Hope.

Hunterian.

E 479. The *Patella compressa*, Linn.

Fig. Lam. Anim. sans Vert. vol. vii. p. 533.

Hab. Cape of Good Hope.

Hunterian.

E 480. The *Patella Mexicana*, Brod. and Sow.

Fig. Zool. Journ. vol. iv. p. 369.

Hab. Acapulco.

Purchased.

E 481. The *Patella Magellanica*, var., Gmel.

Fig. Lam. Anim. sans Vert. vol. vii. p. 534.

Hab. South America.

Hunterian.

E 482. The *Patella granularis*, Linn.

Fig. Quoy, Voy. de l'Astrolabe, pl. 70. figs. 12 *a*–15.

Hab. Cape of Good Hope.

Hunterian.

- E 483. The *Patella margaritaria*, Chemn.

Fig. Chemn. Conch. t. xi. p. 180. fig. 1914.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 484. The *Patella imbricata*, Reeve.

Fig. Conch. Icon. pl. 32. fig. 93.

Hab. Monganui, New Zealand.

Hunterian.

- E 485. The *Patella radians*, Gmelin.

Fig. Lam. Anim. sans Vert. vol. vii. p. 531.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 486. The *Patella cantharus*, Reeve.

Fig. Reeve, Conch. Icon. pl. 40. fig. 131.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 487. The *Patella variegata*, Reeve.

Fig. Reeve, Conch. Icon. pl. 16. fig. 36.

Hab. Australia.

Hunterian.

- E 488. The *Patella decora*, Philippi.

Fig. Reeve, Conch. Icon. pl. 15. fig. 33.

Hab. Port Ross, Auckland Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 489. *Patella testudinaria*, Linn.

Fig. Lam. Anim. sans Vert. vol. vii. p. 532.

Hab. Philippine Islands.

Purchased.

- E 490. The Rock Limpet, *Patella vulgata*, Linn.

Fig. Penn. Brit. Zool. vol. iv. t. 89. fig. 145.

Hab. British Seas.

This species is collected in large quantities for bait on the coasts of Berwickshire and Yorkshire ; and the Limpet is also used as an article of food.

Hunterian.

Genus SIPHONARIA, Blainville.

The *Siphonariæ* are distinguished from the *Patellæ* by the interrupted muscular impression, which is more or less distinctly marked on one side of the interior of the shell, corresponding to a canal, for the conveyance of water to the branchial cavity. The *Siphonariæ* are widely distributed.

E 491. The *Siphonaria gigas*, Sow.

Fig. Reeve, Conch. Icon. pl. 1. fig. 5.

Hab. Galapagos Islands.

Purchased.

E 492. The *Siphonaria siphon*, Sow.

Fig. Sow. Genera of Shells, *Siphonaria*, figs. 1-4.

Hab. Philippine Islands.

Hunterian.

E 493. The *Siphonaria atra*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, vol. ii. p. 337. pl. 25. fig. 41.

Hab. Bay of Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

E 494. A species of *Siphonaria* near to *S. funiculata*, Reeve.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 495. The Crooked Siphonaria, *Siphonaria obliquata*, Sow.

Fig. Sow. Tank. Cat. App. p. 7. no. 809.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 496. The Toothed Siphonaria, *S. denticulata*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 25. figs. 19, 20.

Hab. Australia.

Purchased.

Family Calyptræidæ.

The Bonnet Limpets are conical shells, with a more or less spiral apex; the interior of the shell is either simple or divided by a shelly process, to which the adductor muscles are attached.

Genus CALYPTRÆA, Lam.

The *Calyptrææ*, or Cup-and-saucer Limpets, are widely distributed ; and allied fossil forms are found in the Carboniferous and Tertiary strata.

a. Lithedaphus, Owen. Internal appendage semifunnel-shaped.

E 497. The *Calyptræa equestris*, Linn. var. ?

Fig. Reeve, Conch. Icon. pl. 1. fig. 1.

Hab. Philippines.

Presented by Lord Valentia.

E 498. A species allied to *Calyptræa Dillwynii*, Gray.

Hab. Chili.

Presented by Mr. L. Reeve.

b. Crucibulum, Schum. Internal appendage cup-shaped.

E 499. The *Calyptræa extintorium*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 622.

Hab. This species occurs recent on the coast of Chili, and subfossil in raised deposits near Valparaiso.

Presented by W. J. Broderip, Esq., F.R.S.

E 500. The *Calyptræa rudis*, Broderip.

Fig. Trans. Zool. Soc. vol. i. pl. 27. fig. 1.

Hab. Panama.

Purchased.

E 501. The *Calyptræa spinosa*, Sow.

Fig. Sow. Genera of Shells, figs. 4-7.

Hab. Peru.

Purchased.

E 502. A variety of *Calyptræa spinosa*, Sow.

Hab. West Elena.

Purchased.

- E 503. The *Calyptæa corrugata*, Carpenter.

Fig. Carpenter, Proc. Zool. Soc. 1856, p. 204.

Hab. California.

Purchased.

c. Trochita, Schum. Internal appendage trochoid.

- E 504. The *Calyptæa radians*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 626.

Hab. Philippines.

Purchased.

- E 505. The *Calyptæa conica*, Brod.

Fig. Brod. Trans. Zool. Soc. vol. i. pl. 28. fig. 27.

Hab. Xipixapi, West Columbia.

Purchased.

- E 506. The *Calyptæa maculata*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 72. figs. 6-9.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 507. The *Calyptæa sinensis*, Linn. sp. (*C. lævigata*, Lam.)

Fig. Forbes and Hanley, Brit. Moll. vol. ii. p. 463.

Hab. Plymouth.

Presented by Mr. J. Rowse.

Genus CREPIDULA, Lam.

Shell oblong ; internal appendage in the form of a horizontal septum.

- E 508. The *Crepidula fornicata*, Linn.

Fig. Lam. Anim. sans Vert. vol. vii. p. 641.

Hab. United States.

Hunterian.

- E 509. The *Crepidula Lessonii*, Brod.

Fig. Trans. Zool. Soc. vol. i. pl. 29. fig. 5.

Hab. Bay of Guayaquil.

Purchased.

- E 510. The *Crepidula dilatata*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 644.

Hab. Straits of Magellan.

Purchased.

E 511. The *Crepidula aculeata*, Gmel.

Fig. Reeve, Conch. Icon. pl. 4. fig. 22.

Hab. Peru.

Hunterian, and purchased.

E 512. The *Crepidula onyx*, Sow.

Fig. Sow. Genera of Shells, fig. 2.

Hab. West Elena.

Purchased.

E 513. The *Crepidula costata*, Desh.

Fig. Reeve, Conch. Icon. pl. 4. fig. 22.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 514. The *Crepidula unguiformis*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 642.

Hab. Panama.

Purchased.

Genus *PILEOPSIS*, Lam.E 515. The Bonnet Limpet, *Pileopsis Ungarica*, Lam.

Fig. Lam. Anim. sans Vert. vol. vii. p. 609.

Hab. Plymouth.

Presented by Mr. J. Rowse.

Genus *HIPPONYX*, Defrance.E 516. The *Hipponyx Australis*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 72. figs. 25-34.

Hab. New Holland.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Fissurellidæ*.

Conical, limpet-shaped shells, with a recurved apex, and having either the anterior margin notched or the apex perforated. The muscular impression horseshoe-shaped, as in the *Patellidæ*.

Genus *FISSURELLA*, Lam.

The Key-hole Limpets are widely distributed, and range in depth from the laminarian zone to fifty fathoms. The fossil species occur in the Oolitic and Tertiary rocks.

- E 517. Two specimens of *Fissurella nigra*, Lesson (*F. grandis*, Sow.).

Fig. Lesson, Voyage de la Coquille, p. 412.

Hab. Valparaiso, attached to the under surface of stones on the shore.

Purchased.

- E 518. Two specimens of the same species, subfossil.

Hab. From the raised sea-beds at Valparaiso.

Presented by W. J. Broderip, Esq., F.R.S.

- E 519. Two specimens of *Fissurella maxima*, Sow.

Fig. Reeve, Conch. Icon. pl. 4. fig. 22.

Hab. Valparaiso.

Purchased.

- E 520. The *Fissurella lata*, Sow.

Fig. Reeve, Conch. Icon. pl. 1. fig. 5.

Hab. Island of St. Mary, Chili.

Purchased.

- E 521. Two specimens of *Fissurella crassa*, Lam

Fig. Lam. Anim. sans Vert. 2nd edit. vol. vii. p. 592.

Hab. Valparaiso.

Purchased.

- E 522. The *Fissurella limbata*, Sow.

Fig. Reeve, Conch. Icon. pl. 2. fig. 10.

Hab. Valparaiso.

Purchased.

- E 523. The *Fissurella picta*, Lam. (*Patella*, Gmel.)

Fig. Lam. Anim. sans Vert. 2nd edit. vol. vii. p. 590.

Hab. Straits of Magellan. *Presented by Capt. Sir E. Home, Bart., R N.*

- E 524. The *Fissurella Bridgesii*, Reeve.
Fig. Reeve, Conch. Icon. pl. 3. fig. 16.
Hab. Chili, on the rocks. *Purchased.*
- E 525. The *Fissurella aperta*, Sow. (*Pupillæa*, Gray.) A species characterized
by the large size of the apical fissure.
Fig. Reeve, Conch. Icon. pl. 6. fig. 39.
Hab. Coast of Patagonia. *Purchased.*
- E 526. The *Fissurella costata*, Lesson (*F. rudis*, Desh.).
Fig. Lesson, Voyage de la Coquille, p. 410.
Hab. Valparaiso. *Purchased.*
- E 527. The *Fissurella lata*, Sow.
Hab. A subfossil shell, from the elevated beach at Valparaiso.
Presented by W. J. Broderip, Esq., F.R.S.
- E 528. The *Fissurella Græca*, Lam.
Fig. Lam. Anim. sans Vert. vol. vii. p. 592.
Hab. West Indies. *Hunterian.*
- E 529. The *Fissurella pustula*, Linn. sp.
Fig. Reeve, Conch. Icon. fig. 52.
Hab. West Indies. *Hunterian.*
- E 530. The *Fissurella Barbadosensis*, Gmel. sp.
Fig. Lam. Anim. sans Vert. vol. vii. p. 595.
Hab. West Indies. *Hunterian.*
- E 531. A species allied to *F. gibberula*, Reeve.
Hab. Locality unrecorded. *Hunterian.*

GENUS PARMOPHORUS, Blainv.

- E 532. The *Parmophorus Australis*, Lam.
Fig. Quoy, Voy. de l'Astrolabe, pl. 69. fig. 4.
Hab. New Holland. *Presented by Mrs. Robinson.*

E 533. A variety of the *Parmophorus Australis*, Lam., var.

Fig. Quoy, Voy. de l'Astrolabe, pl. 69. fig. 1.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus EMARGINULA, Lam.

E 534. A species of *Emarginula* with numerous imbricated ribs; allied to *E. Australis*.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family *Haliotidæ*.

Shells spiral, ear-shaped, or trochiform, nacreous, generally with a large aperture, the outer margin notched or perforated. No operculum.

Genus HALIOTIS, Linn.

The *Haliotides*, or Ear Shells, are among the most depressed of spiral shells, and are remarkable for the iridescent brilliancy of the pearly nacre of the internal surface, and also of the outer surface when polished. They also present a peculiar structure in having on the left side of the shell, and parallel to the margin, a row of perforations, generally equidistant from each other, and serving the purpose of conveying the water to the breathing organs. The number of perforations varies in the different species, but are usually of similar number in each individual of the same species; the mollusc filling up the posterior opening, as the new or anterior one becomes formed in the several stages of growth. These orifices in *Haliotis* are probably analogous to the fissure in *Emarginula*, the apical opening in *Fissurella*, and the marginal one in the fossil genus *Trochotoma*. The *Haliotides* inhabit the coasts of South Africa, Ceylon, China, Japan, and the Philippines; a few species occur in California, and a greater number in New Zealand and New Holland. They appear to represent the Chitons in geographical distribution. The *Haliotides* are found at low water, attached to rocks and the under surfaces of stones.

E 535. A series of specimens of *Haliotis splendens*, Reeve. Some of the spe-

cimens are uncoated and polished, and show the iridescent character of the layers of the shell when the external coating is removed artificially. In consequence of the richly coloured surface thus produced, this shell has frequently been used for the ornamental work of various manufactured articles. The prominent muscular marking on the inner surface is well developed.

Fig. Reeve, Conch. Icon. pl. 3. fig. 9.

Hab. California.

Hunterian, and presented.

- E 536. Two specimens of *Haliotis rubicunda*, Lam., de Montfort, sp. This species, which constitutes the genus *Padollus* of Montfort, is readily distinguished from the other species of *Haliotis* by the prominent rounded inner rib, which is roughly striated, and the thin striated oblique lamellæ, which are concentrically arranged between the spire and the inner rib ; the orifices are large and tubular.

Fig. Lam. Anim. sans Vert. vol. ix. p. 30. *Padollus rubicundus*, Montfort ; *P. scalaris*, Leach.

Hab. Australia.

Collected by Capt. P. P. King, R.N., and

presented by W. J. Broderip, Esq., F.R.S.

- E 537. The Rainbow Haliotis, *Haliotis iris*, Gmel.

Fig. Lam. Anim. sans Vert. vol. ix. p. 23.

Hab. Monganui, New Zealand.

Hunterian.

- E 538. A series of specimens in different stages of growth of the *Haliotis Midæ*, Linn. This fine species varies according to age ; in the young state, the shell is striated, and does not exhibit the prominent, undulating, irregular ridges which characterize the more advanced condition.

Fig. Lam. Anim. sans Vert. vol. ix. p. 23.

Hab. Indian Ocean.

Hunterian.

- E 539. The Knotted Haliotis, *Haliotis nævosa*, Martyn. A variable species, the spiral ridges and oblique undulations being more or less prominently developed. It is the *H. rubra* of Leach.

Fig. Martyn, Univ. Conch. t. 2. fig. 63.

Hab. New Zealand and Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

E 540. The Ormer Shell, *Haliotis tuberculata*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. ii. p. 485.

Hab. The Channel Islands; but not found on the shores of England.

This species is frequently cooked for food in the Channel Islands; and the shell is largely used for inlaying works in *papier maché*. *Hunterian*.

E 541. The *Haliotis excavata*, Lam.

Fig. Lam. Anim. sans Vert. vol. ix. p. 25.

Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus STOMATIA, Lam.

E 541 A. The *Stomatia imbricata*, Lam.

Fig. Encycl. Méth. pl. 450. fig. 2.

Hab. Indian Ocean. *Presented.*

Genus IANTHINA, Lam.

The *Ianthinæ* (the Ocean or Violet Shells) are gregarious, abounding in the open seas of different parts of the world.

E 542. The *Ianthina fragilis*, Lam. This species is frequently drifted by the south-west winds on the southern and western coasts of Britain.

Fig. Encycl. Méth. pl. 456. fig. 1 a, b.

Hab. Atlantic. Mediterranean. *Hunterian, and presented.*

E 543. A series of the *Ianthina bifida*, Nuttall. A small delicate species marked with numerous lamellar striæ deeply inflected, and corresponding to the well-defined notch in the outer margin of the aperture.

Fig. Reeve, Conch. Icon. pl. 5. fig. 25.

Hab. Pacific, lat. 23° 5', long. 99° E. : also from Blind Bay.

Presented by Capt. Sir E. Home, Bart., R.N.

Family Turbinidæ.

The *Turbinidæ* are spiral, solid, turbinated shells; nacreous, and having the operculum either calcareous and pauci-spiral, or horny and multi-spiral.

The shells of this family are largely used for a variety of ornamental purposes, from their pearly nature when the external layer is removed.

Genus *TURBO*, Linn.

Shell turbinated, solid; operculum shelly, solid, either smooth, grooved, or mammillated externally, and horny and pauci-spiral internally.

The Top Shells are widely distributed, especially in the tropical seas, Australia, New Zealand, &c.; the fossil species range from the Palæozoic to the Tertiary strata.

- E 544. The *Turbo marmoratus*, Linn., and shelly operculum.

Fig. Quoy, Voy. de l'Astrolabe, pl. 59. figs. 10-16.

Hab. China.

Purchased.

- E 545. The *Turbo marmoratus*, partly uncoated.

Hunterian.

- E 546. The *Turbo tuberculosus*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 60. figs. 1, 2.

Hab. Port Essington.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 547. The *Turbo pica*, Linn.

Fig. Lam. Anim. sans Vert. vol. ix. p. 193.

Hab. Atlantic Ocean.

Hunterian.

- E 548. The *Turbo Cookii*, Quoy, with the operculum.

Fig. Quoy, Voy. de l'Astrolabe, pl. 60. fig. 19.

Hab. Australian Sea.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 549. The *Turbo torquatus*, Gmel.

Fig. Chemn. Conch. vol. x. p. 293.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 550. Two specimens of *Turbo Sarmaticus*, Linn.; one shell partially uncoated, and showing a portion of the inner pearly layer.

Fig. Lam. Anim. sans Vert. vol. ix. p. 187.

Hab. Indian Ocean.

Presented by John Quekett.

- E 551. The Silver-lipped Turbo, *Turbo argyrostoma*, Linn.

Fig. Lam. Anim. sans Vert. vol. ix. p. 188.

Hab. Indian Ocean.

Hunterian.

- E 552. The *Turbo chrysostoma*, Linn.
Fig. Lam. Anim. sans Vert. vol. ix. p. 189.
Hab. Indian Ocean. *Hunterian.*
- E 553. The *Turbo smaragdus*, Gmel.
Fig. Quoy, Voy. de l'Astrolabe, pl. 60. fig. 6.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 554. The *Turbo diaphanus*, Gmel.
Fig. Quoy, Voy. de l'Astrolabe, tab. 64. figs. 1, 2.
Hab. Kapiti, Cook's Straits, Australia. *Hunterian.*
- E 555. The *Turbo margaritaceus*, Linn.
Fig. Chemn. Conch. vol. v. tab. 177. fig. 1762.
Hab. Indian Ocean. *Hunterian.*
- E 556. The *Turbo Nicobaricus*, Lam. (*Chrysostoma*, Gray; *Helix paradoxa*, Born.)
Fig. Lam. Anim. sans Vert. vol. ix. p. 214.
Hab. Nicobar Islands. *Hunterian.*
- E 557. The *Turbo petholatus*, Linn.
Fig. Lam. Anim. sans Vert. vol. ix. p. 192.
Hab. Indian Ocean. *Hunterian, and purchased.*
- E 558. The *Turbo coronatus*, Gmel.
Fig. Encycl. Méth. pl. 448. fig. 2.
Hab. Indian Ocean. *Hunterian.*
- E 559. The *Turbo sparverius*, Gmel.
Fig. Lam. Anim. sans Vert. vol. ix. p. 220.
Hab. Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus PHASIANELLA, Lam. (Pheasant Shell.)

The larger species of Pheasant Shells are found in the Australian Seas, the smaller species in the Mediterranean and West Indian Seas.

- E 560. The *Phasianella Australis*, Gmel.

Fig. Quoy, Voy. de l'Astrolabe, pl. 59. figs. 1-7.

Hab. Australia.

Purchased.

Genus IMPERATOR, Montfort.

- E 561. The *Imperator heliotropium*, Martyn (*Trochus imperialis*, Lam.).

Fig. Martyn, Univ. Conch. pl. 30.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 562. The *Imperator undosum*, Wood.

Fig. Wood, Index Test. Suppl. (*Trochus*) pl. 5. fig. 1.

Hab. California.

Presented by John Quekett.

Genus TROCHUS, Linn.

- E 563. The *Trochus Niloticus*, Linn.

Fig. Encycl. Méth. pl. 444. fig. 1 a, b.

Hab. China. Tongataboo.

Hunterian.

- E 564. The *Trochus (Pyramis) obeliscus*, Gmel.

Fig. Lam. Anim. sans Vert. vol. ix. p. 134.

Hab. China.

Hunterian.

- E 565. The *Trochus cælatus*, Chemn.

Fig. Lam. Anim. sans Vert. vol. ix. p. 128.

Hab. Indian Ocean.

Hunterian.

- E 566. The *Trochus imbricatus*, Gmel.

Fig. Lam. Anim. sans Vert. vol. ix. p. 140.

Hab. Antilles.

Hunterian.

- E 567. The *Trochus (Gibbula) magus*, Linn.

Fig. Pennant, Brit. Zool. vol. iv. tab. 8. fig. 107.

Hab. South coast of England.

Hunterian, and presented.

- E 568. The *Trochus sanguinolentus*, Chemn.

Fig. Chemn. Conch. vol. v. tab. 168. fig. 1615.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 569. The *Trochus granosus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 129.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 570. The *Trochus canalifer*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, pl. 64. figs. 26-29.
Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 571. The *Trochus dentatus*, Forsk.
Fig. Forsk. Ægypt. Descr. An. p. 125.
Hab. Red Sea. *Presented by Lord Valentia.*
- E 572. Two specimens of *Trochus*.
Hab. Unrecorded. *Hunterian.*

Genus MONODONTA, Lam.

- E 573. The *Monodonta tæniata*.
Fig. Quoy, Voy. de l'Astrolabe, pl. 63. figs. 15, 16.
Hab. Port Royal Harbour, King George's Sound.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 574. The *Monodonta constricta*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 180.
Hab. Port Royal Harbour, King George's Sound.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 575. The *Monodonta labeo*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 176.
Hab. Atlantic Ocean. *Hunterian.*
- E 576. The *Monodonta Pharaonis*, Linn. (*Clanculus*, Gray.)
Fig. Encycl. Méth. pl. 447. fig. 7.
Hab. Red Sea. *Hunterian.*
- E 577. The *Monodonta lugubris*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 180.
Hab. Isle of France. *Hunterian.*

- E 578. The *Monodonta coronaria*, Lam.

Fig. Encycl. Méth. pl. 447. fig. 6.

Hab. Locality unrecorded.

Hunterian.

- E 579. The *Monodonta Zelandica*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 64. figs. 12-14.

Hab. Bay of Islands, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 580. The *Monodonta striolata*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 63.

Hab. New Holland.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 581. The *Delphinula? heteroclita* (Turbo), Kiener.

Fig. Kiener, Spec. des Coquilles.

Hab. Chili.

Presented by W. J. Broderip, Esq., F.R.S.

Genus DELPHINULA, Lam.

- E 582. The *Delphinula laciniata*, Lam.

Fig. Blainv. Malac. pl. 33. fig. 3.

Hab. Indian and Chinese Seas.

Hunterian.

Genus ELENCHUS, Humphrey.

The species are mostly restricted to Australia and New Zealand.

- E 583. The *Elenchus iris*, Chemn.

Fig. Lam. Anim. sans Vert. vol. ix. p. 146.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 584. A species of *Elenchus*.

Hab. Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 585. The *Elenchus* (*Bankivia*) *varians*, Gray.

Fig. Krauss, Sudafr. Moll. p. 105. pl. 1. fig. 7.

Hab. New Zealand.

Hunterian.

Genus ROTELLA, Lam.

The *Rotellæ* are polished lenticular shells, with a depressed spire and callous base.

They are distributed in the tropical and Australian Seas.

E 586. The *Rotella lineolata*, Lam.

Fig. Lam. Anim. sans Vert. vol. ix. p. 116.

Hab. Auckland, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Family Neritidæ.

Semiglobose, generally thick shells, with a very small spire and semilunate aperture, having the outer margin sharp and the columella expanded and flattened; the inner whorls are thin and frequently absorbed. Operculum shelly, subspiral, articulated.

Genus NERITA, Linn.

Shell thick, smooth or spirally grooved, with a broad and flat columella, straight and toothed on the inner edge. The species are mostly restricted to the warm regions.

E 587. The *Nerita ornata*, Sow. The largest and most solid species of the genus, characterized by the black longitudinal ridges and white interspaces.

Fig. Reeve, Conch. Icon. pl. 1. fig. 3.

Hab. Panama.

Purchased.

E 588. The *Nerita plicata*, Linn.

Fig. Lam. Anim. sans Vert. vol. viii. p. 609.

Hab. An abundant species at Wallis's Island; also at Tongataboo.

Hunterian, and presented.

- E 589. The *Nerita Ascensionis*, Reeve.
Fig. Quoy, Voy. de l'Astrolabe, pl. 65. figs. 19-21.
Hab. Isle of Ascension. *Purchased.*
- E 590. The *Nerita lineata*, Chemn.
Fig. Chemn. Conch. Cab. vol. v. pl. 191. fig. 1958.
Hab. New Zealand. North Australia.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 591. The *Nerita polita*, Linn., with the shelly operculum.
Fig. Quoy, Voy. de l'Astrolabe, vol. iii. pl. 65. fig. 3.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 592. Different varieties of *Nerita polita*, Linn.
Fig. Lam. Anim. sans Vert. vol. viii. p. 604.
Hab. Mauritius. *Hunterian.*
- E 593. The *Nerita plexa*, Chemn. (*N. exuvia*, Lam.)
Fig. Chemn. Conch. Cab. vol. v. pl. 190. fig. 1944.
Hab. Philippines. *Purchased.*
- E 594. The *Nerita atrata*, Chemn.
Fig. Chemn. Conch. Cab. vol. v. pl. 190. fig. 1954.
Hab. Tongataboo. New Zealand.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 595. The *Nerita nigerrima*, Chemn.
Fig. Reeve, Conch. Icon. pl. 3. fig. 10.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 596. The *Nerita scabricosta*, Lam.
Fig. Lam. Anim. sans Vert. vol. viii. fig. 608.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 597. The *Nerita albicella*, Linn. This species has the broad columella tuberculated, and the exterior of the operculum granulated.
Fig. Reeve, Conch. Icon. pl. 15. fig. 64.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 598. The *Nerita annulata*, Reeve.
Fig. Reeve, Conch. Icon. pl. 18. fig. 78.
Hab. Tongataboo. Presented by Capt. Sir E. Home, Bart., R.N.
- E 599. The *Nerita fulgurans*, Gmelin.
Fig. Reeve, Conch. Icon. pl. 11. fig. 51.
Hab. Honduras and Southern Seas. Hunterian.
- E 600. The *Nerita neritopsoides*, Reeve.
Fig. Reeve, Conch. Icon. pl. 16. fig. 69.
Hab. Tongataboo. Presented by Capt. Sir E. Home, Bart., R.N.

Genus NAVICELLA, Lam.

Shell smooth, oblong, depressed, with a large aperture ; operculum shelly. The species are found in the warm regions.

- E 601. The *Navicella sanguisuga*, Reeve. The umbo is produced and frequently eroded.
Fig. Reeve, Conch. Icon. pl. 4. fig. 17.
Hab. In streams at Upolu, Navigators' Group.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 602. The *Navicella Cookii*, Recluz.
Fig. Reeve, Conch. Icon. pl. 4. fig. 14.
Hab. Philippine Islands. Purchased.
- E 603. The *Navicella depressa*, Lesson.
Fig. Reeve, Conch. Icon. pl. 1. fig. 3.
Hab. Society Islands. Purchased.

Genus NERITINA, Lam.

The *Neritinæ* are freshwater shells, and chiefly living in the streams of the warm regions. One or two species are found in the temperate regions, and some live in brackish water.

- E 604. The *Neritina morio*, Sow.

Fig. Proc. Zool. Soc. 1832, p. 201.

Hab. Easter Island, South Sea.

Purchased.

This species is closely allied to *Nerita*, having the marine habits of that genus.

- E 605. The *Neritina canalis*, Sow.

Fig. Reeve, Conch. Icon. pl. 1. fig. 1.

Hab. Tahiti, Society Islands, in streams.

Purchased.

- E 606. The *Neritina zebra*, Lam.

Fig. Reeve, Conch. Icon. pl. 9. fig. 39.

Hab. Tahiti, Society Islands.

Purchased.

- E 607. The *Neritina virginea*, Lam.

Fig. Reeve, Conch. Icon. pl. 21. fig. 91.

Hab. West Indies.

Hunterian.

- E 608. The *Neritina* (*Nerita*) *pupa*, Linn. The markings vary more or less in this species.

Fig. Reeve, Conch. Icon. pl. 21. fig. 91.

Hab. Jamaica, abundant.

Hunterian.

- E 609. The *Neritina* (*Nerita*) *fluviatilis*, Linn. This is the only British species of the genus; it is found in France, and also occurs in the brackish water of the Baltic.

Fig. Reeve, Conch. Icon. pl. 28. fig. 125.

Hab. Rivers of England.

Hunterian.

- E 610. The *Neritina viridis*, Linn. sp. A semitransparent species, living in the sea.

Fig. Lam. Anim. sans Vert. vol. viii. p. 577.

Hab. West Indies.

Presented by Lord Valentia.

- E 611. The *Neritina latissima*, Broderip. This species is distinguished by the wing-like expansion of the outer lip.
Fig. Reeve, Conch. Icon. pl. 3. fig. 13.
Hab. Mexico. *Purchased.*
- E 612. The *Neritina dilatata*, Broderip.
Fig. Brod. Proc. Zool. Soc. 1832.
Hab. Tahiti, Society Islands. *Purchased.*
- E 613. The *Neritina Sandwichensis*, Desh. (*N. caffra*, Sow.)
Fig. Sow. Conch. Illustr. fig. 5.
Hab. Sandwich Islands. *Purchased.*
- E 614. The *Neritina spinosa*, Sow. In this spinous species the whorls are not angled; the surface is encircled with numerous dark lines, and the columella is partly stained with reddish brown.
Fig. Reeve, Conch. Icon. pl. 11. fig. 52.
Hab. Tahiti, Society Islands. *Purchased.*
- E 615. The *Neritina longispina*, Recluz. This remarkable shell (the *Nerita corona* of Chemn., not of Linn.) has the spire more or less exserted, and the whorls coronated with a row of long spines.
Fig. Revue Zool. Soc. Cuvierienne, 1841, p. 312.
Hab. Mauritius. *Purchased.*
- E 616. The *Neritina Recluziana*?, Le Guillou.
Fig. Revue Zool. Soc. Cuv. 1841, p. 345.
Hab. Upolu, Navigators' Group.
Presented by Capt. Sir E. Home, Bart., R.N.

GENUS *NERITOPSIS*, Grateloup

- E 617. The *Neritopsis radula*, Linn.
Fig. Chemn. Conch. vol. v. pl. 190. fig. 1946.
Hab. Society Islands. *Purchased.*

Family *Paludinidæ*.

Shell conical, with a more or less thick epidermis and rounded aperture ; the operculum shelly or horny. The genera inhabit fresh waters in most parts of the world.

Genus *PALUDINA*, Lam.

Shell turbinated ; operculum horny. Animal viviparous.

E 618. The *Paludina vivipara*, Lam., and the operculum.

Fig. Drap. Moll. pl. 1. fig. 16.

Hab. Britain, in rivers.

Hunterian.

E 619. The *Paludina olivacea*, Sow (*Meladomus*, Swains.)

Fig. Sow. Genera of Shells, No. 41.

Hab. Africa.

Purchased.

Subgenus *BITHYNIA*, Gray.

Shell small, turbate ; operculum shelly. Animal oviparous.

E 620. The *Bithynia tentaculata*, Linn.

Fig. Turton, Manual, fig. 120.

Hab. Freshwater streams, Britain.

Hunterian.

Genus *AMPULLARIA*, Lam.

Shell globose ; spire small ; body-whorl ventricose ; operculum shelly.

E 621. The *Ampullaria nobilis*, Reeve, var. ?, or *A. rugosa* ?, Lam.

Fig. Reeve, Conch. Icon. pl. 2. fig. 8.

Hab. Unrecorded.

Hunterian.

E 622. The *Ampullaria ampullacea*, Linn. ?, or *A. globosa*, Sw.

Fig. Reeve, Conch. Icon. pl. 10. fig. 48.

Hab. Borneo.

Hunterian.

- E 623. The *Ampullaria* allied to *A. polita*, Desh.
Fig. Reeve, Conch. Icon. pl. 7. fig. 35.
Hab. Locality unrecorded. *Hunterian.*
- E 624. Two specimens of *Ampullaria* allied to *A. virens*, Lam.
Hab. Unrecorded. *Hunterian.*
- E 625. The *Ampullaria Bolteniana*, Chemn.
Fig. Woodward's Mollusca, p. 139.
Hab. Nile. *Purchased.*
- E 626. The *Ampullaria effusa*, Lam.
Fig. Swainson, Zool. Illustr. vol. iii. pl. 157.
Hab. South America. *Hunterian.*

Genus AMPHIBOLA, Schum. (*Ampullacera*, Quoy.)

Shell globose, with a roughened surface ; columella fissured ; outer lip channelled near the suture ; operculum horny, subspiral.

The species of this genus are chiefly confined to New Zealand, and the animal is eaten by the natives.

- E 627. The *Amphibola avellana*, Chemn.
Fig. Quoy, Voy. de l'Astrolabe, pl. 15. figs. 1-8.
Hab. The River Kava-Kava, Bay of Islands, New Zealand.
Presented by Capt. Sir E. Home, Bart., R.N.

Family Litorinidæ.

Shell spiral or turbinated, never pearly ; aperture rounded, entire ; operculum horny, with few whorls. The species of this family mostly inhabit the littoral zone, and feed on sea-weed.

Genus LITORINA, Férussac.

- E 628. The *Litorina pulchra*, Sow.
Fig. Sow. Genera of Shells, *Litorina*, figs. 2, 3.
Hab. Panama. *Purchased.*

- E 629. The *Litorina fasciata*, Gray.
Fig. Reeve, Conch. Icon. pl. 4. fig. 20.
Hab. Tumbez, Peru. *Purchased.*
- E 630. The *Litorina obesa*, Sow.
Fig. Sow. Genera of Shells, fig. 6.
Hab. Wallis's Island. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 631. The *Litorina angulifera*.
Fig. Quoy, Voy. de l'Astrolabe, pl. 33. figs. 1, 2.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 632. The Common Periwinkle, *Litorina litorea*, Linn.
Fig. Reeve, Conch. Icon. pl. 4. fig. 18.
Hab. Coast of Britain. *Hunterian.*
- E 633. The *Litorina rudis*, Donovan.
Fig. Donovan, Brit. Shells, vol. i. pl. 33. fig. 3.
Hab. Coast of Britain. *Presented by John Morris, F.G.S.*
- E 634. The *Litorina varia*, Sow.
Fig. Sow. Genera of Shells, No. 37.
Hab. Panama. *Purchased.*
- E 635. The *Litorina (Risella) acuminata*, Gray, or *R. melanostoma* ?
Fig. Gray, Coll. Brit. Mus.
Hab. Harbour, King George's Sound.
Presented by Capt. Sir E. Home, Bart., R.N.

Genus SOLARIUM, Lam.

- E 636. The *Solarium perspectivum*, Linn. sp.
Fig. Encycl. Méth. pl. 446. fig. 1.
Hab. Indian Ocean. *Hunterian.*
- E 637. The *Solarium variegatum*, Gmel. sp.
Fig. Encycl. Méth. pl. 446. fig. 6.
Hab. New Zealand. *Purchased.*

Genus PHORUS, Montfort.

- E 638. The Carrier Shell, *Phorus conchyliophorus*, Born.

Fig. Woodward's Mollusca, pl. 10. fig. 1.

Hab. Indian Ocean.

Hunterian.

- E 639. A species of *Phorus*, allied to *P. calculiferus*, Reeve.

Fig. Quekett, Lect. on Histology, vol. ii. p. 320.

Hab. Locality unrecorded.

Presented by John Quekett.

Family Turritellidæ.

Spiral, turreted, or tubular shells, with a simple aperture ; operculum horny, multispiral.

Genus TURRITELLA, Lam.

- E 640. The *Turritella terebra*, Lam.

Fig. Encycl. Méth. pl. 49. fig. 3.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 641. The *Turritella duplicata*, Lam.

Fig. Encycl. Méth. pl. 449. fig. 1.

Hab. Indian Ocean.

Hunterian.

- E 642. The *Turritella torulosa*?, Kiener.

Fig. Kiener, Spec. des Coquilles.

Hab. Unrecorded.

Presented by Lord Valentia.

- E 643. The *Turritella rosea*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 55. fig. 24.

Hab. Pacific Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 644. The *Turritella communis*, Risso.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 172. pl. 89. figs. 1-3.

Hab. Britain.

Hunterian?

Genus SCALARIA, Lam.

E 645. The *Scalaria pretiosa*, Lam.

Fig. Encycl. Méth. pl. 451. fig. 5.

Hab. China.

Purchased.

E 646. The *Scalaria diadema*, Sow.

Fig. Sow. Thesaur. Conch. pl. 35. fig. 121.

Hab. Galapagos Islands.

Purchased.

E 647. Worn specimens of *Scalaria Australis*, Lam.

Fig. Lam. Anim. sans Vert. vol. ix. p. 76.

Hab. Bay of Islands, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Family Melaniadæ.

Spiral turreted shells, with a dark epidermis, and the aperture either channelled or notched ; operculum horny, spiral.

The species chiefly inhabit the freshwater streams of the warm regions of the globe.

Genus MELANIA, Lam.

E 648. A species of *Melania*, the apex of which is much corroded, a character very common in this genus.

Hab. South Sea Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 648A. The *Melania amarula*, Lam.

Fig. Encycl. Méth. pl. 458. fig. 6.

Hab. Feejee Islands.

Purchased.

Genus MELANOPSIS, Lam.

E 649. A species allied to *Melanopsis costata* (fossil?), Féruss.

Fig. Encycl. Méth. pl. 458. fig. 7.

Hab. Locality unrecorded.

Hunterian.

- E 650. The *Melanopsis costata*, Féruss.

Fig. Mém. de la Soc. d'Hist. Nat. de Paris, vol. i. pl. 7. fig. 14.

Hab. Lake of Tiberias.

Presented by Dr. A. Leared.

Genus *PIRENA*, Lam.

- E 651. The *Pirena atra*, Linn. (*P. terebralis*, Lam.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 56. fig. 40.

Hab. Ceylon.

Purchased.

Family *Cerithiadæ*.

Elongate spiral shells, with many volutions ; aperture ovate, channelled in front ; posterior canal more or less distinct ; operculum horny.

Genus *CERITHIUM*, Brug.

The recent species are widely distributed, and chiefly tropical. The fossil forms occur in the Secondary, and are very numerous in the Tertiary strata.

- E 652. The *Cerithium nodulosum*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 54. figs. 5, 6.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 653. *Cerithium ebeninum*, Brug.

Fig. Quoy, Voy. de l'Astrolabe, pl. 55. figs. 1-3.

Hab. New Zealand.

Hunterian.

- E 654. The *Cerithium vertagus*, Lam. (*Rhinoclavis*, Sow.)

Fig. Encycl. Méth. pl. 443. fig. 2.

Hab. New Guinea.

Presented by Lord Valentia.

- E 655. The *Cerithium lineatum*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, t. iii. p. 110. pl. 54. figs. 7, 8.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 656. The *Cerithium aluco*, Lam.

Fig. Encycl. Méth. pl. 443. fig. 5.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 657. The *Cerithium variegatum*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 55. fig. 17.

Hab. King George's Sound.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 658. The *Cerithium literatum*, Brug.

Fig. Lam. Anim. sans Vert. vol. ix. p. 303.

Hab. Antilles.

Hunterian.

- E 659. The *Cerithium tuberculatum*, Lam.

Fig. Lam. Anim. sans Vert. vol. ix. p. 301.

Hab. Red Sea.

Hunterian.

- E 660. The *Cerithium obtusum* ?, Lam. (*Cerithidia*.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 55. figs. 18-21.

Hab. South Seas. Australia.

Presented by Lieut. Burnaby, R.N.

- E 661. The *Cerithium palustre*, Brug. (*Pyrauxus*, Montf.)

Fig. Quoy, Voy. de l'Astrolabe, t. iii. p. 122. pl. 55. figs. 14, 15, 16.

Hab. Shores, Indian Ocean.

Hunterian.

- E 662. The *Cerithium telescopium*, Lam. (*Terebralia*, Sow.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 55. figs. 4-6.

Hab. Amboyna. Indian Ocean.

Hunterian.

Family *Pyramidellidæ*.

Turreted shells, with a minute sinistral nucleus, generally lengthened ; aperture small ; columella often plaited ; operculum horny, imbricated.

Genus PYRAMIDELLA, Lam.

- E 663. The *Pyramidella dolabrata*, Lam.

Fig. Encycl. Méth. pl. 452. fig. 2.

Hab. West Indies.

Hunterian.

Genus *EULIMA*, Risso.

E 664. The *Eulima polita*, Linn. sp.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 229.

Hab. Britain.

Purchased.

Genus *STYLINA*, Fleming (*Stylifer*, Brod.).

The *Stylina* is a small parasitical Mollusc, which is found imbedded in the soft parts of Starfish, or adherent to *Echini*. There is one British species which occurs on the *Echinus Flemingii*, found on the coast of Devonshire.

E 665. The *Stylina astericola*, Broderip.

Fig. Sow. Genera of Shells, No. 38.

Hab. Philippines.

Purchased.

E 666. The *Stylina subulata*, Broderip.

Fig. Sow. Genera of Shells, No. 38.

Hab. Philippines.

Purchased.

Family *Naticidæ*.

Globose or ear-shaped shells, with a small spire and few whorls ; aperture semi-lunar ; operculum shelly or horny.

Genus *NATICA*, Adanson.

Shell semiglobose ; spire short, umbilicated ; umbilicus sometimes covered, or partially filled with a spiral callosity. The *Naticæ* are carnivorous, and occur on the sandy and muddy beaches of the littoral zone. The species are widely distributed. The fossil forms occur in the Palæozoic, Secondary, and Tertiary strata.

E 667. The *Natica canrena*, Lam. The operculum of this species is solid and calcareous.

Fig. Sow. Genera of Shells, *Natica*, fig. 1.

Hab. West Indies.

Hunterian.

- E 668. The *Natica millepunctata*, Lam.
Fig. Lam. Anim. sans Vert. t. viii. p. 636.
Hab. Mediterranean. *Hunterian.*
- E 669. The *Natica Zelandica*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, vol. ii. p. 237. pl. 66. fig. 11.
Hab. Tongataboo. New Zealand.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 670. The *Natica ala-papilionis*, Chemn. sp.
Fig. Chemn. Conch. Cab. vol. v. p. 257. fig. 1868.
Hab. Indian Ocean. *Hunterian.*
- E 671. The *Natica (Lunatia) vitellus*, Lam.
Fig. Lam. Anim. sans Vert. vol. viii. p. 636.
Hab. Indian Ocean. *Hunterian.*
- E 672. The *Natica (Lunatia) Forskalii*, Chemn. sp.
Fig. Chemn. Conch. Cab. vol. xi. p. 197. fig. 1901.
Hab. South Seas. *Hunterian.*
- E 673. The *Natica mamillaris*, Lam.
Fig. Lam. Anim. sans Vert. vol. viii. p. 628.
Hab. West Indies. *Hunterian.*
- E 674. The *Natica mamilla*, Lam. (*Nerita*, Linn.)
Fig. Encycl. Méth. pl. 455. fig. 5.
Hab. Philippines. *Hunterian.*
- E 675. The *Natica pyriformis*, Recluz.
Fig. Reeve, Conch. Icon. pl. 5. fig. 16.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 676. The *Natica melanostoma*, Lam. (*Nerita*, Gmel.)
Fig. Quoy, Voy. de l'Astrolabe, pl. 66. figs. 1-3.
Hab. Sechelle Islands. *Hunterian.*

- E 677. The *Natica Incii*, Philippi. A depressed species with a large umbilical and chestnut-coloured callosity; operculum horny, spiral.

Fig. Reeve, Conch. Icon. pl. 20. fig. 89.

Hab. Port Ross, Auckland Island.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 678. The *Natica glaucina*, Lam. (*Nerita*, Linn.)

Fig. Lam. Anim. sans Vert. vol. viii. p. 625.

Hab. Mediterranean.

Hunterian.

- E 679. The *Natica Lamarckii*, Recluz. A depressed globose species, with a wide umbilicus, and a broad, grooved, recurved callosity.

Fig. Reeve, Conch. Icon. pl. 2. fig. 6.

Hab. Locality unrecorded.

Hunterian.

- E 679A. The *Natica Maura*, Brug.

Fig. Reeve, Conch. Icon. pl. 7. fig. 2.

Hab. Philippines.

Purchased.

Genus SIGARETUS, Lam.

The *Sigareti* are ear-shaped shells, with a small spire and a wide oblique aperture. They inhabit the seas of the West Indies, India, China, and Peru. The fossil species occur in the Tertiary strata.

- E 680. The *Sigaretus haliotideus*, Lam. (*Helix*, Linn.)

Fig. Lam. Anim. sans Vert. vol. ix. p. 9.

Hab. West Indies.

Hunterian.

- E 681. The *Sigaretus concavus*, Lam.

Fig. Lam. Anim. sans Vert. t. ix. p. 10.

Hab. Peru.

Hunterian.

Genus NARICA, Recluz.

- E 682. A species of *Narica* allied to *N. cancellata*, Gray.

Fig. Gray, Fig. Moll. Anim. pl. 103. fig. 3.

Hab. Pacific Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

Section B. SIPHONOSTOMATA.

Shell spiral, with the aperture either notched or produced into a canal in front ; operculum horny, plaited. The species are all marine.

Family *Cypræidæ*.

Convolute, enamelled shells, with the spire generally concealed, and a narrow aperture channelled at each end, and sometimes produced ; outer lip, in the young state, thin, in the adult thickened, inflected, and crenulated.

Genus *Ovulum*, Lam.

The recent species chiefly inhabit the tropical seas ; the fossil forms are found in the Tertiary strata.

E 683. The *Ovulum ovum*, Linn.

Fig. Encycl. Méth. tab. 358. fig. 1.

Hab. New Guinea.

Hunterian.

E 684. The *Ovulum gibbosum*, Lam.

Fig. Encycl. Méth. tab. 357. fig. 4.

Hab. East coast of South America.

Presented by Mrs. Robinson.

E 685. The *Ovulum verrucosum*, Linn. sp.

Fig. Encycl. Méth. tab. 357. fig. 5.

Hab. Indian Ocean.

Hunterian.

E 686. The *Ovulum patula* (*Bulla*), Pennant. A thin shell with a simple columella and a sharp outer lip ; it forms the genus *Calpurna*, Leach.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 498. pl. 114. figs. 1, 2.

Hab. South coast of Britain.

Hunterian.

Genus *Erato*, Risso.

E 687. The *Erato lævis*, Don.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 502. pl. 115. fig. 4.

Hab. Britain.

Presented by John Morris, F.G.S.

Genus *CYPRÆA*, Linn.

The Cowries are ovate, ventricose, polished shells, with a longitudinal narrow aperture; the margins of the outer lip and columella in the adult shell being furnished, more or less, with plicæ or teeth throughout their entire length.

The shell of the *Cypræa* presents a peculiar feature in the change of form which it undergoes during different periods of growth. In the young and immature state the shell is Bulla-form, with a prominent spire or produced columella; the aperture is large, the test thin and fragile; the outer lip is thin and the columella smooth, and the markings diffused. As the shell advances to maturity, the test is thickened; the teeth on the lips and columella become more and more perfectly developed and strengthened; at a later stage, the base and sides increase in thickness, and the whole shell is covered with a coating of enamel deposited by the lobes of the mantle, which, at their point of junction, leave a longitudinal and sometimes a flexuous line on the back of the shell, at unequal distances from the margins.

The species are widely distributed in the tropical seas, chiefly in those of the Old World. The fossil forms occur in the Tertiary strata.

- E 688. The *Cypræa testudinaria*, Linn., or the Tortoiseshell Cowry. This species varies in its markings according to age; the young shell has several obscure bands of chestnut-brown blotches, interrupted and irregular in size, and which disappear during the progress of growth. In the more mature state the milky-brown base is clouded and spotted with fulvous and chestnut-brown; and one peculiar feature of the shell consists in having the last coating of enamel profusely sprinkled with minute white specks, promiscuously arranged, and which appear to be more or less deeply imbedded in the enamel.

Fig. Reeve, Conch. Icon. Mon. *Cypræa*, pl. 3. fig. 9.

Hab. Mauritius.

Hunterian.

- E 689. Four specimens of *Cypræa Mauritianæ*, Linn., and a series of specimens showing the forms in the earlier stages of growth, and the variety of

markings assumed by this species; the thin outer lip and the prominent spire of the young form, which become subsequently modified, are also fully exhibited.

Fig. Encycl. Méth. pl. 350. fig. 2.

Hab. Island of Mauritius. Ceylon, &c. *Hunterian, and purchased.*

- E 690. A series of specimens of *Cypræa Arabica*, Linn., exhibiting the various stages of growth.

Fig. Encycl. Méth. pl. 352. figs. 1, 2.

Hab. Southern and Eastern Seas. *Hunterian.*

- E 691. Two specimens of the same from the Isle of Pines. Three specimens of the same from the Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 692. Three specimens of the Mole Cowry, *Cypræa talpa*, Linn.

Fig. Encycl. Méth. pl. 353. fig. 4.

Hab. Eastern Seas. *Hunterian.*

- E 693. A series of the Measled Cowry, *Cypræa exanthema*, Linn., showing the different markings (either banded or spotted) according to respective ages.

Fig. Encycl. Méth. pl. 349.

Hab. West Indian Islands. *Hunterian.*

- E 694. The Panther Cowry, *Cypræa pantherina*, Solander.

Fig. Encycl. Méth. pl. 353. fig. 5.

Hab. Red Sea, where it is found in great abundance. *Hunterian.*

- E 695. *Cypræa Argus*, Linn.

Fig. Encycl. Méth. pl. 350. fig. 1.

Hab. Ceylon. *Hunterian.*

The spots, or imaginary eyes, in this shell have suggested the name, from the Hundred-eyed Aristorides.

- E 696. Two fine specimens of *Cypræa tigris*, Linn., or Tiger Cowry, and two

smaller individuals; and another specimen in which zigzag markings may be observed beneath the outer porcellaneous spotted covering, the spots being more regularly arranged than in the other specimens.

At the Pearl Islands this species lives in very shallow water, and always under rolled masses of Madrepora.

Fig. Encycl. Méth. pl. 353. fig. 3.

Hab. Eastern Seas.

Purchased.

E 697. Five specimens of *Cypræa vitellus*, Linn.

Fig. Encycl. Méth. pl. 354. fig. 6.

Hab. The Eastern Seas.

Presented by Lord Valentia.

E 698. Two specimens of the Soiled Cowry, *Cypræa stercoraria*, Linn.

Fig. Encycl. Méth. pl. 354. fig. 5.

Hab. The Persian Gulf.

Presented by Lord Valentia.

E 699. Two specimens of *Cypræa mappa*, Linn.

Fig. Encycl. Méth. pl. 352. fig. 4.

Hab. Pacific Ocean; found on the reefs.

Hunterian, and purchased.

E 700. The *Cypræa carneola*, Linn., two small specimens of the same, and another specimen from the Feejees.

Fig. Encycl. Méth. pl. 354. fig. 3.

Hab. Pacific Ocean, on the reefs.

Hunterian, and presented by Capt. Sir E. Home, Bart., R.N.

E 701. The Mouse Cowry, *Cypræa mus*, Linn.

Fig. Encycl. Méth. pl. 354. fig. 1.

Hab. Pacific Ocean.

Hunterian.

E 702. The Sandy Cowry, *Cypræa arenosa*, Gray.

Fig. Sow. Conch. Illustr. fig. 75.

Hab. Pacific Ocean, on the reefs.

Hunterian.

- E 703. Four specimens of the Thrush Cowry, *Cypræa turdus*, Lam.
Fig. Encycl. Méth. pl. 355. fig. 9.
Hab. Pacific Ocean. *Presented by Lord Valentia.*
- E 704. The Lurid Cowry, *Cypræa lurida*, Lam.
Fig. Encycl. Méth. pl. 354. fig. 2.
Hab. The Mediterranean. *Hunterian.*
- E 705. A series of specimens of *Cypræa lynx*, Linn., showing the varieties and mode of growth.
Fig. Encycl. Méth. pl. 355. fig. 8.
Hab. Indian Ocean. *Hunterian, and presented.*
- E 706. A series of specimens of the Snake's-head Cowry, *Cypræa caput-serpentis*, Linn.
Fig. Encycl. Méth. pl. 354. fig. 4.
Hab. Pacific Ocean. Tongataboo.
Hunterian, and presented by Capt. Sir E. Home, Bart., R.N.
- E 707. Four specimens of the Thick-edged Cowry, *Cypræa caurica*, Linn.; a variable species, one specimen showing a more elongated form.
Fig. Encycl. Méth. pl. 356. fig. 10.
Hab. Eastern Seas. *Presented by Lord Valentia.*
- E 708. Two neatly marked specimens of *Cypræa Isabella*, Linn., and four specimens of a variety of the same, without the longitudinal markings.
Fig. Encycl. Méth. pl. 355. fig. 6.
Hab. Tongataboo. *Hunterian, and presented.*
- E 709. Eight specimens of *Cypræa errones*, Linn.; one of the few species of Cowry in which the sides are not spotted.
Fig. Sow. Conch. Illustr. fig. 124.
Hab. Eastern Seas. *Hunterian, and presented by Lord Valentia.*

- E 710. Three specimens of the Daybreak Cowry, *Cypræa diluculum*, Reeve ; the Ziczac Cowry of Linnæus, and the Waved Cowry of Lamarck.
Fig. Reeve, Monograph of *Cypræa*, pl. 14. fig. 65.
Hab. Wallis's Island. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 711. Six specimens of the Red Cowry, *Cypræa helvola*, Linn.
Fig. Lam. Anim. sans Vert. vol. x. p. 533.
Hab. Ceylon. *Presented by Mrs. Robinson.*
- E 712. Four specimens of the Ring Cowry, *Cypræa annulus*, Linn.
Fig. Encycl. Méth. pl. 356. fig. 7.
Hab. Isle of Pines. *Hunterian.*
- E 713. Four specimens of a darker-marked variety of the same.
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 714. Six specimens of the Money Cowry, *Cypræa moneta*, Linn.
Fig. Encycl. Méth. pl. 356. fig. 3.
Hab. Feejee Islands. *Hunterian.*
- E 715. The Sieve-like Cowry, *Cypræa criboraria*, Linn.
Fig. Encycl. Méth. pl. 355. fig. 5.
Hab. Ceylon. *Presented by Lord Valentia.*
- E 716. The *Cypræa asellus*, Linn.
Fig. Encycl. Méth. pl. 356. fig. 5.
Hab. The West Indies.
 The dark bands which in the earlier stages of growth covered the columella as well as back, are cut off on the sides in the mature state by a deposit of ivory-white. *Hunterian.*
- E 717. The *Cypræa felina*, Gray.
Fig. Gray, Zool. Journ. vol. i. p. 384.
Hab. Indian Ocean. *Presented by Lord Valentia.*
- E 718. The *Cypræa globulus*, Linn.
Fig. Encycl. Méth. pl. 356. fig. 2.
Hab. East Indies. *Hunterian.*

- E 719. The *Cypræa cruenta*, Gmelin (*C. variolaria*, Lam.).
Fig. Encycl. Méth. pl. 353. fig. 2.
Hab. Indian Ocean. *Presented by Lord Valentia.*
- E 720. The *Cypræa ocellata*, Linn.
Fig. Encycl. Méth. pl. 355. fig. 7.
Hab. Eastern Seas. *Presented by Lord Valentia.*
- E 721. Six specimens of *Cypræa erosa*, Linn.
Fig. Encycl. Méth. pl. 355. fig. 4.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

Subgenus TRIVIA, Gray.

- E 722. Various specimens of *Cypræa quadripunctata*, Gray.
Fig. Gray, Zool. Journ. vol. iii. p. 368.
Hab. Philippine Islands. *Hunterian.*
- E 723. Eight specimens of the Louse Cowry, *Cypræa pediculus*, Linn.
Fig. Encycl. Méth. pl. 356. fig. 1.
Hab. West Indies. *Hunterian.*
- E 724. The *Cypræa oryza*, Lam., or Rice-grain Cowry.
Fig. Lam. Anim. sans Vert. vol. x. p. 543.
Hab. Pacific Ocean. Philippines. *Hunterian.*
- E 725. A series of specimens of *Cypræa (Trivia) Europæa*, Mont.
Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 495. pl. 114. figs. 6-9.
Hab. Plymouth Sound and shores of Britain. *Hunterian.*

Family Volutidæ.

Turreted, convoluted shells, with the aperture notched in front, and the columella obliquely plaited, the lowest plaits being in general the largest. The species are marine, and belong to the more temperate and warmer zones.

The fossil species are chiefly restricted to the Tertiary strata.

Genus *VOLUTA*, Lam.

- E 726. The *Voluta scapha*, Gmel.
Fig. Encycl. Méth. pl. 391. fig. *a, b*.
Hab. Singapore. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 727. The *Voluta Magellanica*, Chemn. (*Scaphella*, Swainson.) The specimen polished.
Fig. Sow. Thesaur. Conch. pl. 54. fig. 99.
Hab. Straits of Magellan. *Purchased.*
- E 728. A series of specimens in different stages of growth of *Voluta pacifica*, Solander; the smaller ones with a thin outer lip, the larger with the thickened outer lip and the expanded columella.
Fig. Sow. Thesaur. Conch. pl. 48. fig. 25.
Hab. Alcarva, New Zealand.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 729. A variety of the same species, in which the tubercles are not so prominently developed (*V. elongata*, Swainson). *Presented.*
- E 730. *Voluta vespertilio*, Linn.
Fig. Sow. Thesaur. Conch. pl. 47. figs. 15-23.
Hab. Indian Ocean. *Purchased.*
- E 731. The *Voluta undulata*, Lam.
Fig. Sow. Thesaur. Conch. pl. 48. figs. 28, 29.
Hab. New Holland. *Hunterian.*
- E 732. The *Voluta musica*, Linn.
Fig. Sow. Thesaur. Conch. pl. 49. figs. 36-39.
Hab. Antilles. *Hunterian, and purchased.*
- E 733. The *Voluta vexillum*, Chemn.
Fig. Sow. Thesaur. Conch. pl. 50. figs. 54-56.
Hab. Indian Ocean. *Hunterian.*

- E 734. The *Voluta zebra*, Leach.

Fig. Sow. Thesaur. Conch. pl. 53. figs. 83, 84.

Hab. Indian Ocean.

Hunterian.

- E 735. The *Voluta Lapponica*, Linn. (*V. indica*, Sow.)

Fig. Sow. Thesaur. Conch. pl. 51. figs. 68-70.

Hab. Indian Ocean.

Purchased.

Genus MELO, Broderip.

The *Melo* is a large oval shell with a short spire.

- E 736. A large specimen of the *Melo Æthiopica*, Linn.

Fig. Encycl. Méth. pl. 387. fig. 1.

Hab. Indian Ocean.

Presented by F. Goold, Esq., M.R.C.S.

- E 737. A large specimen of the *Melo indica*, Gmelin, having the shell perforated by a species of *Cliona*.

Fig. Lam. Anim. sans Vert. vol. x. p. 379.

Hab. Indian Ocean.

Purchased.

- E 738. The *Melo indica*, Gmelin (*Voluta melo*, Soland.); with a specimen of the embryo shell taken from the nidus: see also Physiological Gallery, Prep. No. 2950 B.

Fig. Encycl. Méth. pl. 389. fig. 1.

Hab. Indian Ocean.

Presented.

- E 739. Two specimens of the *Melo indica*, Gmelin, showing the nucleus.

Hab. Indian Ocean.

Presented by Dr. Livesay.

Genus CYMBA, Broderip (*Yetus*, Adanson).

A volutiform shell, with a large and globular nucleus in the young state, which becomes partly concealed by the growth of the shell. The animal is ovoviviparous.

- E 740. The *Cymba Neptuni*, Gmelin, sp., or Neptune's Glass.
Fig. Encycl. Méth. pl. 386. fig. 1. Sow. Thesaur. Conch. t. 80. fig. 14.
Hab. Africa. Persian Gulf. *Presented by John Quekett.*

- E 741 Two specimens of the Boat Shell, *Cymba proboscidalis* (*Voluta*), Lam.; with a specimen of the embryo shell showing the large, prominent, and globular nucleus.
Fig. Encycl. Méth. pl. 389. fig. 2.
Hab. Shores of the Arcas Channel, between the mainland and the Archipelago of Bijougas, West coast of Africa.
Presented by Capt. H. Mangles Denham, R.N., F.R.S.

Genus MITRA, Lam.

The *Mitræ* are pectinibranchiate Gasteropods, having fusiform turriculate shells with an acute apex; the columella is plicated, the plaits surrounding the columella throughout the entire length.

- E 742. Four specimens of *Mitra episcopalis*, Lam., in different stages of growth, the larger and adult specimen showing the spinous margin of the outer lip; the volutions are longitudinally striate in the young shells, and become obsolete in the mature state.
Fig. Reeve, Conch. Icon. pl. 1. fig. 5.
Hab. Ceylon, &c. *Hunterian, and presented.*

- E 743. The *Mitra corrugata*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 314.
Hab. Australia, Philippines, &c. *Hunterian.*

- E 744. Two specimens of *Mitra sphærulata*, Mart. The smaller and less perfect has suffered injury, and been repaired by the animal during the progress of growth.
Fig. Mart. Univ. Cab. fig. 21 (*M. scabriuscula*, Lam.).
Hab. Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 745. The *Mitra ambigua* (var.), Swainson.
Fig. Swainson, Zool. Illustr. vol. i. pl. 30. fig. 2.
Hab. Isle of Pines. Presented by Capt. Sir E. Home, Bart., R.N.
- E 746. Five specimens of *Mitra granulosa*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 307.
Hab. West Indies ; found on the reefs. Hunterian.
- E 747. A species allied to *Mitra circula*, Kiener.
Hab. South Seas. Presented by Capt. Sir E. Home, Bart., R.N.
- E 748. Two specimens of a dark-coloured species of *Mitra* (*M. nigra* ?).
Hab. Pacific. Purchased.
- E 749. The *Mitra ferculata*, Martyn.
Fig. Martyn, Conch. Univers. fig. 21.
Hab. Pacific Ocean. Presented by Capt. Sir E. Home, Bart., R.N.
- E 750. The *Mitra litterata*, Lam.
Fig. Reeve, Conch. Icon. pl. 20. fig. 153.
Hab. Isle of Pines. Presented by Capt. Sir E. Home, Bart., R.N.
- E 751. A species of *Mitra* allied to *M. amphorella*, Lam.
Hab. Feejee Islands. Presented by Capt. Sir E. Home, Bart., R.N.
- E 752. The *Mitra caffra*, Lam.
Fig. Reeve, Conch. Icon. pl. 3. fig. 20.
Hab. Vavou. Purchased.
- E 753. A coronated species of *Mitra*, the *M. pontificalis*, Lam.
Fig. Encycl. Méth. pl. 370. fig. 2 a, b.
Hab. Vavou. Purchased.
- E 754. The *Mitra cucumerina* ?, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 332.
Hab. Pacific Ocean. Feejees. Purchased.

Genus MARGINELLA, Lam.

E 755. The *Marginella avellana*, Lam.

Fig. Encycl. Méth. pl. 377. fig. 5.

Hab. Gambia, West Africa.

Purchased.

E 756. The *Marginella cornea*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 444.

Hab. Gambia.

Purchased.

E 757. The *Marginella faba*, Lam.

Fig. Encycl. Méth. pl. 377. fig. 1.

Hab. Gambia.

Purchased.

Genus CONOHELIX, Swainson.

E 758. The *Conohelix marmorata*, Swains. (*Mitra conica*, Desh.).

Fig. Quoy, Voy. de l'Astrolabe, pl. 45 bis, figs. 1, 2.

Hab. Society Islands.

Purchased.

Family Conidæ.

Genus CONUS, Linn.

Conical shells, with a short spire and a smooth columella; the outer lip is notched at the suture. The species are numerous and most abundant in the tropical seas, two species being found in the Mediterranean. They range in depth from low water to 40 fathoms. The fossil species are chiefly restricted to the Tertiary strata.

E 759. Two large specimens of *Conus millepunctatus*, Lam.; one specimen polished, showing the markings remaining on the apex.

Fig. Sow. Thesaur. Conch. (*Conus*) pl. 7. fig. 151.

Hab. Pacific Ocean.

Purchased.

E 760. The *Conus betulinus*, Linn.

Fig. Sow. Thesaur. Conch. pl. 11. fig. 244.

Hab. Ceylon.

Purchased.

- E 761. The *Conus Sumatrensis*, Brug., one specimen having the epidermis.
Fig. Sow. Thesaur. Conch. pl. 7. fig. 158.
Hab. Feejee Islands. Presented by Capt. Sir E. Home, Bart., R.N.
- E 762. The *Conus litteratus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 7. figs. 155, 156.
Hab. Ceylon. Moluccas. Hunterian.
- E 763. A series of specimens of *Conus flavidus*, Lam., some partly uncoated, others with the epidermal covering and transversely ridged surface.
Fig. Sow. Thesaur. Conch. pl. 8. fig. 168.
Hab. Feejee Islands. Presented by Capt. Sir E. Home, Bart., R.N.
- E 764. The *Conus lividus*, Brug., one specimen partly uncovered.
Fig. Sow. Thesaur. Conch. pl. 2. fig. 27.
Hab. Feejee Islands. Presented by Capt. Sir E. Home, Bart., R.N.
- E 765. The *Conus classiarius*, Brug.
Fig. Sow. Thesaur. Conch. pl. 10. fig. 213.
Hab. Southern Seas. Hunterian.
- E 766. The *Conus marmoreus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 1. fig. 5.
Hab. China. Pacific, &c. Hunterian.
- E 767. The *Conus princeps*, Linn. (*C. regius*, Chemn.)
Fig. Sow. Thesaur. Conch. pl. 2.
Hab. Panama. West Columbia. Hunterian.
- E 768. The *Conus eburneus*, Brug. Two specimens with the epidermal covering, and a series of dwarf specimens from the Feejees.
Fig. Sow. Thesaur. Conch. pl. 12. figs. 247-249.
Hab. Feejee Islands. Hunterian, and presented.
- E 769. The *Conus arenatus*, Brug. The largest shell with the epidermis; the

others uncoated, and showing the peculiar markings. A variety with the epidermis, two specimens.

Fig. Sow. Thesaur. Conch. pl. 2. figs 17, 18.

Hab. Pacific Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 770. The *Conus prælatus*, Brug.

Fig. Sow. Thesaur. Conch. pl. 24. fig. 585.

Hab. Indian Ocean.

Hunterian.

E 771. The *Conus nebulosus*, Solander.

Fig. Sow. Thesaur. Conch. pl. 4. figs. 61, 62.

Hab. West Indies.

Hunterian.

E 772. The *Conus Nicobaricus*, Brug.

Fig. Sow. Thesaur. Conch. pl. 1. fig. 11.

Hab. Island of Nicobar.

Hunterian.

E 773. A series of specimens of *Conus Hebræus*, Linn.

Fig. Sow. Thesaur. Conch. pl. 3. fig. 56.

Hab. Tongataboo.

Hunterian.

E 774. The *Conus vermiculatus*, Lam.

Fig. Sow. Thesaur. Conch. p. 3. figs. 52, 53.

Hab. Ceylon.

Hunterian.

E 775. Various specimens of *Conus sponsalis*, Brug.

Fig. Sow. Thesaur. Conch. pl. 6. figs. 133, 134.

Hab. King George's Sound.

Presented by Capt. Sir E. Home, Bart., R.N.

E 776. The *Conus minimus*, Brug.

Fig. Sow. Thesaur. Conch. pl. 3. figs. 54, 55.

Hab. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 777. The Mouse Cone, *Conus mus*, Brug.
Fig. Sow. Thesaur. Conch. pl. 4. fig. 78.
Hab. West Indies. *Hunterian.*
- E 778. The *Conus Malaccanus*, Brug.
Fig. Sow. Thesaur. Conch. pl. 16. fig. 366.
Hab. Malacca. *Hunterian.*
- E 779. A series of *Conus acuminatus*, Brug., and two small prettily marked varieties of the same, *C. insignis*, Sow.
Fig. Sow. Thesaur. Conch. pl. 9. figs. 196, 197.
Hab. Southern Seas. *Purchased.*
- E 780. The *Conus proteus*, Brug. (*C. spurius*, Gmel.?)
Fig. Sow. Thesaur. Conch. fig. 235.
Hab. West Indies. *Hunterian.*
- E 781. The *Conus miles*, Linn.
Fig. Sow. Thesaur. Conch. pl. 7. fig. 157.
Hab. Ceylon. *Hunterian.*
- E 782. The *Conus distans*, Lam.
Fig. Sow. Thesaur. Conch. pl. 2. figs. 28, 29.
Hab. Tahiti, on reefs. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 783. The *Conus quercinus*, Brug.
Fig. Sow. Thesaur. Conch. pl. 11. figs. 239, 240.
Hab. Ceylon. *Hunterian.*
- E 784. The *Conus testudinarius*, Mart.
Fig. Sow. Thesaur. Conch. pl. 15. fig. 348.
Hab. Cape de Verde Islands.
- E 785. The *Conus textile*, Linn.
Fig. Sow. Thesaur. Conch. pl. 23. fig. 567.
Hab. Ceylon. Society Islands. *Hunterian.*

- E 786. The *Conus vicarius*, Lam.
Fig. Sow. Thesaur. Conch. pl. 22. fig. 565.
Hab. Australian Seas. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 787. The *Conus episcopus*, Brug.
Fig. Sow. Thesaur. Conch. pl. 24. figs. 596–598.
Hab. Ceylon. *Hunterian.*
- E 788. The *Conus verriculum*, Reeve.
Fig. Conch. Icon. fig. 208. Sow. Thesaur. Conch. pl. 23. fig. 570.
Hab. Ceylon. *Hunterian.*
- E 789. The *Conus flavescent*, Gray.
Fig. Sow. Thesaur. Conch. pl. 14. fig. 305.
Hab. Southern Seas. *Hunterian.*
- E 790. The *Conus verrucosus*, Brug.
Fig. Sow. Thesaur. Conch. pl. 6. figs. 125–127.
Hab. Senegal. *Purchased.*
- E 791. The *Conus geographus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 23. fig. 560.
Hab. Mauritius. *Purchased.*
- E 792. The *Conus striatus*, Linn., with the epidermis.
Fig. Sow. Thesaur. Conch. pl. 23. fig. 557.
Hab. Ceylon. *Hunterian.*
- E 793. The *Conus terebra*, Born. (*C. terebellum*, Gmel.)
Fig. Reeve, Conch. Icon. t. vii. fig. 38.
Hab. Indian Ocean. *Hunterian.*
- E 794. The *Conus nussatella*, Linn.
Fig. Reeve, Conch. Icon. t. xi. fig. 56.
Hab. Indian Ocean, Philippines, &c. *Hunterian.*

- E 795. The *Conus glans*, Brug.
Fig. Encycl. Méth. t. 342. fig. 7.
Hab. Seas of Africa and Asia. *Hunterian.*
- E 796. The *Conus granulatus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 22. fig. 540.
Hab. Antigua, West Indies. *Hunterian.*
- E 797. The *Conus monile*, Brug., var.
Fig. Encycl. Méth. pl. 325. fig. 7.
Hab. Indian Ocean. *Hunterian.*
- E 798. The *Conus amiralis*, Linn.
Fig. Lam. Anim. sans Vert. vol. xi. p. 53.
Hab. Society Islands. *Purchased.*

Genus *PLEUROTOMA*, Lam.

The *Pleurotomæ* are fusiform shells, with a straight and more or less long canal, the outer lip having a slit or fissure near the suture.

The *Pleurotomæ* are widely distributed, occurring in all seas, but most abundant in China and the western coast of America; they range from low-water to 100 fathoms. The fossil species are chiefly confined to the Tertiary strata.

- E 799. The *Pleurotoma Babylonica* (*Murex*), Linn.
Fig. Lam. Encycl. Méth. pl. 439. figs. 1 *a*, *b*.
Hab. New Guinea, Philippines, &c. *Hunterian.*
- E 800. The *Pleurotoma harpularia*, Des Moulins (*Mangelia*; *P. harpula*, Valenc.).
Fig. Reeve, Conch. Icon. fig. 124.
Hab. King George's Sound.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 801. The *Pleurotoma Quoyi*, Des Moulins.
Fig. Reeve, Conch. Icon. fig. 137.
Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 802. The *Pleurotoma Griffithsia*, Reeve.

Fig. Reeve, Conch. Icon. fig. 57.

Hab. Southern Seas.

Hunterian.

- E 803. The *Pleurotoma gracilis*, Mont. sp. (*Mangelia* ; *P. suturalis*, Reeve.)

Fig. Forbes and Hanley, vol. iii. p. 473. pl. 114. fig. 4.

Hab. Plymouth.

Presented by Mr. J. Rowse.

Family *Aporrhaidæ*.

Shell spiral, turbate ; the outer lip more or less expanded, digitate or revolute ; operculum annular.

Genus *APORRHAI*S, Aldrovandus.

- E 804. Three specimens of *Aporrhais pes-pelecani*, Linn.

Fig. Sow. Thesaur. Conch. pl. 5. figs. 3, 4.

Hab. Britain. Mediterranean.

Hunterian.

Genus *STRUTHIOLARIA*, Lam.

The few species belonging to this genus are limited to the seas of New Holland and New Zealand.

- E 805. A series of specimens of *Struthiolaria straminea*, Gmelin, sp. (*Buccinum papulosum*, Martyn), in various stages of growth.

Fig. Sow. Thesaur. Conch. pl. 5. fig. 16.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Buccinidæ*.

Shell ventricose or subulate, either notched in front, or with the canal sharply recurved.

Genus *BUCCINUM*, Linn.

- E 806. A series of specimens of *Buccinum undatum*, Linn. This well-known shell, which is the common Whelk of the market, is found abundantly

around the coasts of Great Britain, and also occurs on the shores of America. It is a variable species as regards the form, size, and thickness of the shell, which are dependent on the character of the locality, the shell being thick in rocky bottoms, and thin on sands and mud.

Fig. Encycl. Méth. pl. 399. fig. 1.

Hab. Shores of England, &c.

Hunterian, and presented.

E 807. An elongated variety of *Buccinum undatum*, Linn.

Hab. South coast of England.

Presented by John Quekett.

E 808. A series of specimens of *Buccinum costatum*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 30. figs. 17-20.

Hab. From the rocks at Monganui, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Subgenus COMINELLA, Gray.

E 809. The *Cominella maculosa*, Lam.

Fig. Reeve, Conch. Icon. fig. 85.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 810. A species of *Cominella*, with the upper surface of the volutions tuberculated.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 811. A species of *Cominella*, the *C. testudinea*, Lam. sp.

Fig. Gray, Fig. Moll. Anim. pl. 14. figs. 1-3.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus TEREBRA, Bruguière.

Shell long, subulate, with numerous volutions; aperture small; columella contorted or oblique; operculum horny.

The number of species belonging to this genus is rather considerable, more than 100 having been described. Their geographical distribution is

essentially tropical, with a few exceptions, one species being found in the Mediterranean, another on the American coasts, and a few occur in the Australian Seas. "The species abound more particularly in the Asiatic and Pacific Seas; are usually found in situations of sand, sandy mud, or fine coral, often under a few feet of water, though sometimes at greater depths; and seem also to be most fruitful in individuals, since, where they inhabit, they may generally be procured in great numbers. About fifty-three inhabit the Pacific and Asiatic Seas, seventeen the American, and fifteen the African Seas; of the rest the localities are unknown."—*Hinds*. Between twenty and thirty fossil species are known, belonging to the Tertiary strata, and of which about one-third are recent.

E 812. The *Terebra maculata*, Linn. sp.

Fig. Lam. Anim. sans Vert. vol. x. p. 238.

Hab. The range of this typical and handsome shell is extensive in the Indian and Pacific Seas. The animal is used as food; and the shell, when ground at an angle, has frequently served as a chisel in the construction of canoes. *Hunterian, and presented.*

E 813. The *Terebra subulata*, Linn. sp.

Fig. Lam. Anim. sans Vert. vol. x. p. 242.

Hab. Society Islands. Moluccas.

Presented by Capt. Sir E. Home, Bart., R.N.

E 814. The *Terebra crenulata*, Linn. sp.

Fig. Lam. Anim. sans Vert. vol. x. p. 239.

Hab. Marquesas and Society Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

E 815. The *Terebra muscaria*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 241.

Hab. Society Islands. Feejee Islands.

One of the specimens is more deeply marked with spots.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 816. The *Terebra commaculata*, Gmelin, sp. (*T. myuros*, *T. scabrella*.)

Fig. Lam. Anim. sans Vert. vol. x. p. 247. Hinds, Thesaur. Conch. t. 42.
fig. 37.

Hab. Pacific Ocean.

Three of the specimens are perforated by a carnivorous mollusc.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 817. The *Terebra Babylonia*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 243.

Hab. Feejee Islands. Bay of Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 818. The *Terebra duplicata*, Linn. sp.

Fig. Lam. Anim. sans Vert. vol. x. p. 243.

Hab. Asiatic Sea. Tongataboo.

Three of the specimens are perforated, and two are marked above the suture by transverse spots, *T. Lamarchkii*, Kiener.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 819. The *Terebra columellaris* (*Myurella*), Hinds.

Fig. Sow. Thesaur. Conch. t. 44. fig. 77.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 820. The *Terebra undulata*?, Gray (*Myurella*, Hinds).

Fig. Gray, Proc. Zool. Soc. 1834, p. 60.

Hab. Bay of Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 821. The *Terebra affinis*, Gray (*T. striata*, Quoy).

Fig. Gray, Proc. Zool. Soc. 1834, p. 60.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 822. The *Terebra inconstans*, Hinds.

Fig. Sow. Thesaur. Conch. pl. 44. fig. 83.

Hab. Sandwich Islands. Feejee Islands.

Presented by Capt. Sir E. Home, Bart., R.N.

E 823. A species of *Terebra*, near to *T. conspersa*, Hinds.

Fig. Sow. Thesaur. Conch. t. 44. fig. 74.

Hab. Bay of Islands, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *EBURNA*, Lam.

E 824. The *Eburna spirata*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 233.

Hab. Ceylon.

Purchased.

Genus *PLANAXIS*, Lam.

E 825. The *Planaxis undulata*, Lam. (*P. sulcatus*, Reeve.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 33. figs. 25-29.

Hab. Wallis's Island. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 826. The *Planaxis sulcata*, Lam.

Fig. Blainv. Malac. pl. 16. fig. 4.

Hab. Antilles.

Purchased.

Genus *NASSA*, Lam.

Shell resembling *Buccinum*, but having the columellar lip covered with a more or less expanded callous enamel, forming a tooth-like process near the anterior canal. The species are widely distributed, occurring in the Arctic, Tropical, and Antarctic Seas. The fossil species are confined to the Tertiary strata.

E 827. The *Nassa unicolorata*, Kiener, sp.

Fig. Icon. Coq. Viv. p. 60. pl. 19. fig. 69.

Hab. Bay of Islands, New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 828. The *Nassa gibbosula*, Linn. sp. A solid gibbose species, with the callous enamel fully developed, and margined with a deep orange-red colour.

Fig. Reeve, Conch. Icon. pl. 10. fig. 64.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 829. The *Nassa arcularia*, Linn. sp.

Fig. Quoy, Voy. de l'Astrolabe, pl. 32. figs. 1-4.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 830. A small species of *Nassa*, near to *N. echinata*, Adams (and *N. muricata*, Quoy).

Fig. Quoy, Voy. de l'Astrolabe, pl. 33. fig. 32.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 831. The *Nassa algida*?, Reeve.

Fig. Reeve, Conch. Icon. pl. 22. fig. 45.

Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 832. The *Nassa reticulata*, Linn.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 388. pl. 108. figs. 1, 2.

Hab. Britain. *Presented by John Morris, F.G.S.*

Genus PHOS, Montf.

- E 833. The *Phos senticosus*, Linn.

Fig. Woodward, Manual of Mollusca, p. 112.

Hab. Australia. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus PURPURA, Lam.

Shell ovate, with a short spire, a more or less flattened columella, and the base emarginate.

- E 834. The *Purpura patula*, Linn. sp., with a specimen of thread dyed with the purple juice, which the animal has the power of secreting, and from which it has been assumed the term *Purpura* was adopted, although the ancient authors applied the term indiscriminately to all molluscs yielding a fluid of a purple colour, an object of considerable economical importance at that early period.

Fig. Sow. Genera of Shells, fig. 1.

Hab. Panama.

Purchased.

- E 835. Four specimens of the same, uncoated.
Hab. Pacific. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 836. The *Purpura planospira* (*P. lineata*), Lam.
Fig. Encycl. Méth. pl. 397. figs. 3, 4.
Hab. Pacific. *Hunterian, and purchased.*
- E 837. Four specimens of *Purpura haustum*, Quoy.
Fig. Quoy, Voy. de l'Astrolabe, pl. 37. figs. 4-8.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 838. Two specimens of *Purpura textilosa*, Lam.
Fig. Encycl. Méth. pl. 398. fig. 4.
Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 839. The *Purpura Rudolphi*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 60.
Hab. Philippine Islands. *Purchased.*
- E 840. The *Purpura ægrota*, Reeve.
Fig. Reeve, Conch. Icon. pl. 9. fig. 42.
Hab. Tongataboo. *Presented.*
- E 841. Two fine specimens of *Purpura armigera*, Lam., coated with Bryozoa and Nullipore.
Fig. Quoy, Voy. de l'Astrolabe, pl. 37. fig. 17.
Hab. Tongataboo. *Presented by Capt Sir E. Home., Bart., R.N.*
- E 842. The *Purpura hystrix*, Linn., or Porcupine Purpura. This species is an intermediate form between this genus and *Ricinula*.
Fig. Quoy, Voy. de l'Astrolabe, pl. 39. figs. 14-16.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 843. The *Purpura pica*, Blainv.
Fig. Lam. Anim. sans Vert. vol. x. p. 110.
Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 844. Two specimens, uncoated, of the *Purpura planospira*, with their horny opercula of a subtrigonal form.

Fig. Encycl. Méth. pl. 397. fig. 5.

Hab. Galapagos Islands.

Purchased.

- E 845. The *Purpura Ascensionis*?, Quoy (*P. insignita*, Sow.?).

Fig. Quoy, Voy. de l'Astrolabe, pl. 37. fig. 20.

Hab. Island of Ascension.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 846. The *Purpura bitubercularis*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 64.

Hab. Southern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 847. The *Purpura affinis*, Reeve; a more elongated form than the *P. armigera*.

Fig. Reeve, Conch. Icon. pl. 13. fig. 77.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 848. The *Purpura lapillus*, Linn. sp., or Little-stone Purpura, a very abundant shell on the British coast, and called 'Man-suckers' in some localities. This is a protean species, varying much in sculpture and colour.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 380. pl. 112. fig. 3.

Hab. Hastings and southern coast, &c.

Presented by W. Clift, Esq., F.R.S.

- E 849. The *Purpura succincta*, Lam.

Fig. Encycl. Méth. pl. 398. fig. 1.

Hab. New Zealand.

Purchased.

- E 850. The *Purpura sertum*, Lam.

Fig. Encycl. Méth. pl. 397. fig. 2.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 851. The *Purpura columellaris*, Lam.

Fig. Encycl. Méth. pl. 398. fig. 3.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 852. The *Purpura bufo*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 69.

Hab. Southern Seas.

Presented.

- E 853. The *Purpura mancinella*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 69.

Hab. North-east coast of Australia.

Hunterian.

Genus CONCHOLEPAS, Lam.

- E 854. Two specimens of *Concholepas Peruviana*, Lam.

Fig. Reeve, Conch. Syst. pl. 262.

Hab. Valparaiso, Chili.

Purchased.

- E 855. Two specimens of the same species, partially coated with Balani, from a raised beach on the coast of Chili.

Presented by W. J. Broderip, Esq., F.R.S.

Genus MONOCEROS, Lam.

This genus, which is allied to *Purpura*, is chiefly characterized by having a conspicuous process near the base of the outer lip.

The species are limited in number, and chiefly found on the west coast of America. The fossil species occur in the Tertiary strata.

- E 856. Three specimens of the *Monoceros cingulatum*, Lam. In this species the columella is furnished with a winding fold or folds, somewhat resembling *Turbinella*.

Fig. Encycl. Méth. pl. 396. fig. 4.

Hab. Panama (in clefts of rocks at low water).

Purchased.

- E 857. Two specimens of *Monoceros crassilabrum*.

Fig. Encycl. Méth. pl. 396. fig. 2.

Hab. Valparaiso, Chili, under stones at low water.

Purchased.

E 858. Two specimens of the variety *Monoceros citrinum*, Sow.

E 859. Two varieties of this species in a subfossil state, from a bed elevated above the sea, on the coast at Valparaiso.

Fig. Lam. Anim. sans Vert. vol. x. p. 120.

Presented by W. J. Broderip, Esq., F.R.S.

Genus *RICINULA*, Lam.

E 860. Four specimens of *Ricinula horrida*, Lam.

Fig. Encycl. Méth. pl. 395. fig. 1.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 861. Two specimens of *Ricinula digitata*, Lam.

Fig. Encycl. Méth. pl. 395. fig. 7.

Hab. Society Islands ; found on the reefs at low water.

Purchased.

E 862. Six specimens of *Ricinula tuberculata*, Blainville.

Fig. Reeve, Conch. Icon. pl. 2. fig. 11.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

E 863. Two specimens of *Ricinula arachnoides*, Lam.

Fig. Encycl. Méth. pl. 395. fig. 3.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 864. Two specimens of *Ricinula morus*, Lam.

Fig. Encycl. Méth. pl. 395. fig. 6.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *MAGILUS*, Montfort (*Campulotus*, Guet.).

E 865. The *Magilus antiquus*, Montf. The tube and shell of the *Magilus*, removed from the coral in which it lived : in the young state the shell is thin and spiral ; as the animal advances in growth it forms an irregular

tube, adapting itself to the upward growth of the coral, and filling the posterior part of the tube with shelly matter.

The tube of the shell has been considered as a stalactite, and referred to the Mineral Kingdom by Guettard; Lamarck placed it among the Annelides; and it was figured and described as a fossil ("un tuyau de mer pétrifié") in the Catalogue of the Collection of M. Davila, 1767, vol. iii. pl. 2. fig. B.

Fig. Reeve, Conch. Syst. pl. 266.

Hab. Red Sea.

Purchased.

E 866. The genus *Leptoconchus* (*L. striatus*, Rüppell). This shell is considered as merely the young or early stage of the *Magilus antiquus*, Montf.

Fig. Rüppell, Trans. Zool. Soc. vol. i. pl. 35. figs. 9, 10.

Hab. Red Sea.

Purchased.

Genus *CASSIS*, Lam.

E 867. A large and fine specimen of the *Cassis Madagascarensis*, Lam.?

Fig. Lam. Anim. sans Vert. vol. x. p. 20.

Hab. Madagascar.

Purchased.

E 868. The *Cassis Madagascarensis*, Lam., upon which a cameo has been cut, showing the dark- and light-coloured layers of the shell.

Hab. Madagascar.

Purchased.

E 869. Two large specimens of the *Cassis cornuta*, Brug.

Fig. Lam. Anim. sans Vert. vol. x. p. 20.

Hab. Penang.

Presented by the Hon. W. T. Lewis.

E 870. Three specimens of the *Cassis cornuta*, Brug.

Fig. Quoy, Voy. de l'Astrolabe, pl. 43. fig. 1.

Hab. Indian Ocean.

Purchased.

E 871. Five specimens of the *Cassis rufa*, Brug.

Fig. Wood's Index Test. pl. 22. fig. 15.

Hab. Indian Ocean.

Purchased.

- E 872. The *Cassis tuberosa*, Linn.
Fig. Encycl. Méth. pl. 406. fig. 1.
Hab. West Indies. *Purchased.*
- E 873. A section of the *Cassis tuberosa*, Linn., exposing the inner volutions and columella. *Hunterian.*
- E 874. The *Cassis vibex*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 38.
Hab. Mediterranean *Hunterian.*
- E 875. The *Cassis areola*, Lam.
Fig. Encycl. Méth. pl. 407. fig. 3.
Hab. Indian Ocean. *Hunterian*
- E 876. The *Cassis sulcosa*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 34.
Hab. Antilles. *Hunterian.*
- E 877. The *Cassis testiculus*, Lam.
Fig. Encycl. Méth. pl. 406. fig. 2.
Hab. Tropical Seas. *Hunterian.*
- E 878. The *Cassis flammea*, Lam.
Fig. Encycl. Méth. pl. 406. fig. 3 a, b.
Hab. Indian Ocean. *Presented by John Quekett.*

Genus ONISCIA, Sow.

- E 879. The *Oniscia oniscus*, Sow. (Linn. sp.)
Fig. Sow. Genera of Shells, No. 24.
Hab. Indian Ocean. *Presented by Lord Valentia.*

Genus DOLIUM, Lam.

- E 880. The *Dolium pomum*, Lam.
Fig. Encycl. Méth. pl. 403. fig. 2 a, b.
Hab. Indian Ocean. *Presented by Lord Valentia.*

- E 881. The *Dolium variegatum*, Kiener.
Fig. Lam. Anim. sans Vert. vol. x. p. 143.
Hab. Southern Seas. *Presented, and purchased.*
- E 882. The *Dolium latilabris*, Kiener (*Malea*, Gray).
Fig. Reeve, Conch. Icon. pl. 4. fig. 5.
Hab. Peru. *Hunterian.*
- E 883. The *Dolium galea*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 139.
Hab. Mediterranean. *Presented by John Quekett.*
- E 884. The *Dolium costatum*, Desh.
Fig. Lam. Anim. sans Vert. vol. x. p. 144.
Hab. Southern Seas. *Presented.*
- E 885. The *Dolium perdix*, Lam.
Fig. Lam. Anim. sans Vert. vol. x. p. 144.
Hab. Equatorial Seas. Tongataboo.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 886. The *Dolium maculatum*, Lam.
Fig. Encycl. Méth. pl. 403. fig. 3.
Hab. Indian Ocean and West Africa. *Hunterian.*
- E 887. The *Dolium olearium*, Linn.
Fig. Encycl. Méth. pl. 403. fig. 1.
Hab. Indian Ocean. Swan River.
Presented by Capt. Sir E. Home, Bart., R.N.
- E 888. The *Dolium fasciatum*, Brug.
Fig. Wood, Index Test. pl. 22. fig. 5.
Hab. Coromandel. *Purchased.*
- E 889. The *Dolium melanostoma*?, Jay.
Fig. Reeve, Conch. Icon. pl. 2.
Hab. Friendly Islands. *Purchased.*

Genus HARPA, Lam.

The *Harpæ* are ventricose shells, with a large aperture and numerous ribs, at somewhat regular distances. There are but few (nine) living species, inhabiting the Pacific, Mauritius, Ceylon, &c. ; the four fossil species occur in the Tertiary strata.

E 890. The *Harpa ventricosa*, Lam.

Fig. Encycl. Méth. pl. 404. fig. 1.

Hab. Mauritius.

Hunterian, and purchased.

E 891. The *Harpa articularis*, Lam.

Fig. Encycl. Méth. pl. 404. fig. 3.

Hab. Feejee Islands.

Purchased.

E 892. The *Harpa nobilis*, Lam. The wide ribs in this species are crossed at intervals with numerous fine black lines.

Fig. Reeve, Conch. Icon. pl. 1. fig. 1.

Hab. Pacific.

Hunterian.

E 893. Two individuals of *Harpa conoidalis*, Lam.

Fig. Reeve, Conch. Icon. pl. 3. fig. 7.

Hab. Tongataboo.

Hunterian.

E 894. The *Harpa minor*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 42. figs. 5-7.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus COLUMBELLA, Lam.

E 895. The *Columbella recurva*, Sow.

Fig. Reeve, Conch. Icon. pl. 4. fig. 18.

Hab. Isle of Plata, South America.

Purchased.

E 896. The *Columbella lanceolata*, Sow.

Fig. Reeve, Conch. Icon. pl. 1. fig. 3.

Hab. Galapagos Islands.

Purchased.

- E 897. The *Columbella labiosa*, Sow.

Fig. Reeve, Conch. Icon. pl. 5. fig. 20.

Hab. West Elena, Columbia.

Purchased

- E 898. The Common *Columbella*, *C. mercatoria*, Linn.

Fig. Reeve, Conch. Icon. pl. 10. fig. 47.

Hab. West Indies.

Hunterian.

- E 899. The *Columbella mendicaria*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 40. figs. 27, 28.

Hab. Southern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus OLIVA, Bruguière.

- E 900. The *Oliva porphyria* (*Voluta*), Linn.

Fig. Encycl. Méth. pl. 361. fig. 4.

Hab. Panama.

Hunterian, and presented by Capt. Sir E. Home, Bart., R.N.

- E 901. The *Oliva tremulina*, Lam.

Fig. Seba, Mus. tab. 3. pl. 53.

Hab. Mauritius.

Hunterian.

- E 902. The *Oliva erythrostoma*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 46. figs. 7-19.

Hab. Ceylon, Philippines, &c.

Hunterian.

- E 903. The *Oliva gibbosa*, Born, sp. (*O. cingulata*, Chemn.) This species is remarkable for the thick deposit of enamel on the columella and part of the spire.

Fig. Chemn. Conch. 10. t. 147. figs. 1369, 1370.

Hab. Africa.

Hunterian.

- E 904. Two varieties of *Oliva Peruviana*, Lam.

Fig. Encycl. Méth. pl. 364. fig. 4.

Hab. Aneka, Peru, South America.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 905. The *Oliva episcopalis*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 611.

Hab. North Australia. Tongataboo. *Hunterian, and presented.*

- E 906. The *Oliva tricolor*, Lam., var. ?

Fig. Encycl. Méth. pl. 365. fig. 4.

Hab. Mauritius. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 907. The *Oliva elegans*, Lam.

Fig. Encycl. Méth. pl. 362. fig. 3 *a, b*.

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 908. Varieties of the *Oliva elegans*, Lam.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 909. Three different varieties of *Oliva inflata*, Lam. (*O. undata*, Lam.)

Fig. Reeve, Conch. Icon. pl. 15.

Hab. Zanzibar. *Hunterian.*

- E 910. Four specimens of *Oliva inflata*, Lam.

Fig. Encycl. Méth. pl. 364. fig. 5 *a, b*.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 911. The *Oliva ispidula*, Linn. sp. A very variable species as regards the external markings ; but the interior is generally of a chocolate-brown colour.

Fig. Encycl. Méth. pl. 366. fig. 6 *a, b*.

Hab. South Seas. *Hunterian.*

- E 912. The *Oliva tigrina*, Lam.

Fig. Wood, Ind. Test. pl. 19. fig. 42.

Hab. Madagascar. *Presented.*

- E 913. The *Oliva columellaris*, Sow. In this species there is a thick deposit of enamel along the columella, and extending on to the spire. The operculum is preserved in some specimens.

Fig. Sow. Tankerville's Cat. p. 35. App.

Hab. Pacific Ocean. *Purchased.*

E 914. The *Oliva carneola*, Lam.

Fig. Encycl. Méth. pl. 365. fig. 5.

Hab. Philippines.

Presented.

E 915. A species allied to *Oliva Senegalensis*, Lam.

Hab. Africa.

Presented by Capt. Sir E. Home, Bart., R.N.

E 916. The Rice Olive, *Oliva oryza*, Lam.

Fig. Lam. Anim. sans Vert. vol. x. p. 631.

Hab. West Indies.

Presented by John Quekett.

E 917. The *Oliva reticularis*, Lam.

Fig. Encycl. Méth. pl. 361. fig. 1 *a*, *b*.

Hab. Locality unrecorded.

Hunterian.

Genus ANCILLARIA, Lam.

E 918. The Chestnut Ancillaria, *Ancillaria castanea*, Sow.

Fig. Sow. Spec. Conch. pl. 1. fig. 20.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

E 919. The *Ancillaria Australis*, Sow.

Fig. Quoy, Voy. de l'Astrolabe, pl. 49. figs. 13, 14, 15.

Hab. New Zealand. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

E 920. The *Ancillaria albi-sulcata*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 49. figs. 5-12.

Hab. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

Family Muricidæ.

Shell more or less spinous or with varices, having a straight anterior canal, and the aperture entire posteriorly.

Genus MUREX, Linn.

The Rock Shells are canaliferous Gasteropods, which form a series of longitudinal

varices at certain intervals (three or more) : during the increase of each volution their varices are either branched, foliated, or spinous. *Ranella* and *Triton* were removed by Lamarck from *Murex*, on account of the different arrangement of the varicose growth.

The animal has the power of absorbing and removing successively those portions of the varices and spines which would otherwise form impediments during its progress of growth.

- E 921. Five specimens of *Murex ramosus*, Linn., and two specimens from which the encrusting matter has been removed, showing the coloured markings.
Fig. Martini, Conch. vol. iii. tab. 102. fig. 980.
Hab. Eastern Seas. *Hunterian, and purchased.*
- E 922. The Cabbage Murex, *Murex brassica*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 581.
Hab. Gulf of California. *Presented by John Quekett.*
- E 923. Two specimens of *Murex radix*, Gmel.
Fig. Lam. Anim. sans Vert. vol. ix. p. 584.
Hab. Pacific Ocean. *Hunterian, and purchased.*
- E 924. Three specimens of *Murex saxatilis*, Lam.
Fig. Sow. Conch. Illustr. No. 86.
Hab. Africa. *Hunterian, and purchased.*
- E 925. Two specimens of *Murex erythrostoma*, Swainson.
Fig. Swains. Zool. Illustr. vol. ii. pl. 73.
Hab. Mexico. *Purchased.*
- E 926. The *Murex regius*, Wood.
Fig. Wood, Index Test. Suppl. pl. 5. fig. 13.
Hab. Panama. *Hunterian.*
- E 927. Two specimens of *Murex princeps*, Broderip.
Fig. Sow. Conch. Illustr. No. 83. fig. 43.
Hab. Central America ; found on coral reefs. *Purchased.*

- E 928. Four specimens of *Murex cornutus*, Linn. This species exhibits the power of the mollusc to remove obstacles during its progress of growth: on the upper part of the columella the remains of a spine may be observed, which has been removed at its base, previous to, and in order that it should not interfere with, the symmetrical formation of the increasing volution.
Fig. Wood, Index Test. pl. 25. fig. 5.
Hab. Found on rocky spots on the west coast of Africa.
Hunterian, and purchased.
- E 929. The *Murex rufus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 574.
Hab. Indian Seas. *Presented.*
- E 930. The *Murex haustellum*, Linn., or Snipe's-head Murex.
Fig. Blainv. Malac. pl. 19. fig. 5.
Hab. Ceylon. Mauritius. *Purchased.*
- E 931. The *Murex turritus*, Reeve.
Fig. Reeve, Monograph *Murex*, pl. 33. fig. 167.
Hab. Southern Seas. *Presented by Lord Valentia.*
- E 932. The *Murex secundus*, Lam.
Hab. Philippines; found on the sands. *Presented.*
- E 933. Four specimens of *Murex scolopax*, Dillwyn.
Fig. Lam. Anim. sans Vert. vol. ix. p. 600.
Hab. Persian Gulf. *Hunterian, and presented by Lord Valentia.*
- E 934. The *Murex crassispina*, Lam., a variety of *M. tribulus*.
Fig. Lam. Anim. sans Vert. vol. ix. p. 564.
Hab. Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 935. Four specimens of *Murex tribulus*, Linn., or the Bramble Murex.
Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 936. Four specimens of the same species in different stages of growth, but less perfect.

Fig. Chemn. Conch. vol. xi. tab. 189.

Hunterian.

- E 937. The *Murex tenuispina*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 36. fig. 3.

Hab. Eastern Seas.

Purchased.

- E 938. The *Murex palma-rosæ*, Lam.

Fig. Quoy, Voy. de l'Astrolabe, pl. 36. fig. 10.

Hab. Indian Ocean.

Purchased.

- E 939. The *Murex adustus*, Lam.

Fig. Blainv. Malac. pl. 19. fig. 1.

Hab. Indian Ocean.

Purchased.

Genus *PISANIA*, BIVON.

The *Pisanie* are buccinoid shells, with a short canal and numerous indistinct varices, or sometimes smooth and striated. The species are distributed in the African, Indian, and Southern Seas.

- E 940. The *Pisania undosa*, Linn. sp. (*Buc. affine*, Wood.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 30. figs. 1, 2.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 941. The *Pisania articulata*, Lam.

Fig. Encycl. Méth. pl. 426. fig. 1.

Hab. West Indies.

Purchased.

- E 942. The *Pisania cincta*, Quoy.

Fig. Quoy, Voy. de l'Astrolabe, pl. 30. figs. 5, 6.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus *RANELLA*, Lam.

The genus *Ranella* is chiefly characterized by the construction of a varix at every half volution, so as to present a more or less depressed and symmetrical two-edged structure.

- E 943. A specimen of *Ranella foliata*, Broderip, showing the inner and outer expanded foliaceous lip, and the coloured aperture.
Fig. Brod. Zool. Journ. vol. ii. p. 199. pl. 11.
Hab. Mauritius. *Purchased.*
- E 944. Three imperfect specimens of the same, in two of which the varix borders the aperture.
Fig. Brod. Zool. Journ. vol. ii. p. 199. pl. 11.
Hab. Mauritius. *Purchased.*
- E 945. A series of the *Ranella spinosa*, Schum. sp. Some of the specimens have the columellar lip absorbed or eaten away, which has probably been effected by the Hermit Crab.
Fig. Reeve, Conch. Icon. pl. 2. fig. 7.
Hab. Mauritius ; Ceylon : found on coral reefs. *Hunterian.*
- E 946. Various specimens of *Ranella granifera*, Lam.
Fig. Reeve, Conch. Icon. pl. 6. fig. 30.
Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 947. The *Ranella gigantea*, Lam., containing a specimen of the Hermit Crab.
Fig. Encycl. Méth. pl. 413. fig. 1.
Hab. Coast of America. *Hunterian.*
- E 948. The *Ranella vexillum*, Sow.
Fig. Sow. Conch. Illustr. *Ranella*, pl. 1. fig. 3.
Hab. New Zealand. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus TRITON, Lam.

The *Tritons* are elongate, ventricose, or fusiform shells, with a prominent canal, and generally covered with a thick hairy or bristly epidermis. They are not furnished with spines or foliaceous branches, as the *Murices*, and differ from *Ranella* in the less symmetrical arrangement of the varices. The *Tritons* are irregularly varicose, the varices being more or less distant from each other ; in some species one varix occurs on each whorl, in others on the last whorl only.

The *Tritons* are widely distributed in the Pacific and Indian Oceans ;

one or two species are found in the Mediterranean. The fossil species are few, and confined to the Tertiary strata.

- E 949. Two large specimens of the Trumpet Shell, *Triton variegatus*, Lam.
Fig. Encycl. Méth. pl. 421. fig. 2.
Hab. Seas of Asia. *Hunterian.*
- E 950. A specimen of *Triton variegatus*, Lam., having a hole bored on one side; through such shells the natives of the South Sea Islands blow and use them as trumpets during certain ceremonial processions.
Hab. Pacific Ocean. *Presented by Sir W. Blizard.*
- E 951. Two specimens of the same species, one of which shows an expanded or separated lamella on the inner margin of the aperture.
Hunterian, and presented.
- E 952. Two smaller and polished specimens of *Triton variegatus*, Lam.
Hab. Indian Ocean; Amboyna. *Presented by John Quekett.*
- E 953. The *Triton nodiferus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 624.
Hab. Mediterranean. *Hunterian.*
- E 954. The *Triton australis*, Lam. The specimen is partly covered with Serpulæ and Bryozoa.
Fig. Reeve, Conch. Syst. vol. ii. pl. 243. fig. 1.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 955. The *Triton femoralis*, Lam. One specimen, partially coated with epidermis.
Fig. Lam. Anim. sans Vert. vol. ix. p. 632.
Hab. West Indies. *Hunterian.*
- E 956. The *Triton Spengleri*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 632.
Hab. Southern Seas. *Hunterian.*

- E 957. The *Triton cutaceus*, Linn. sp. One specimen, covered with Bryozoa, Balani, and Serpulæ.
Fig. Encycl. Méth. pl. 414. fig. 2 *a, b*.
Hab. New Holland. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 958. The *Triton anus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 636.
Hab. Ceylon. *Hunterian, and purchased.*
- E 959. The *Triton cancellinus*, Desh. (*T. clathratus*, Lam.), var.
Fig. Encycl. Méth. pl. 413. fig. 4 *a, b*.
Hab. Ceylon, in coral sand at 6 fathoms. *Hunterian.*
- E 960. The *Triton pilearis*, Lam.
Fig. Encycl. Méth. pl. 415. fig. 4 *a, b*.
Hab. Southern Ocean. *Hunterian.*
- E 961. The *Triton chlorostoma*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 636.
Hab. Southern Seas. *Presented by Lord Valentia.*
- E 962. The *Triton lampas*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 626.
Hab. Philippines ; found on the reefs. *Purchased.*
- E 963. A species of *Triton* (a variety of *T. lampas*?, Lam.), covered with Nullipores, Bryozoa, and some Foraminifera.
Hab. Southern Seas. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 964. The *Triton cancellatus*, Lam.
Fig. Encycl. Méth. pl. 415. fig. 1.
Hab. Pacific. *Hunterian.*
- E 965. The *Triton antiquatus*, Hinds?.
Fig. Reeve, Conch. Icon. pl. 18. fig. 80.
Hab. Society Islands. *Presented.*

Genus *TYPHIS*, Montfort.

A *Murex*-like shell, with tubular spines, the last one open, and occupied by the excurrent canal.

The recent species occur in the Mediterranean, Indian Ocean, and West America ; the fossil forms are found in the Tertiary strata.

E 966. The *Typhis Sowerbii*, Brod. (*Murex tetrapterus*, Brown?.)

Fig. Sow. Conch. Illustr. fig. 9.

Hab. Malta.

Purchased.

Genus *FASCIOLARIA*, Lam.

The *Fasciolaria* are fusiform elongate shells, having the columella tortuous, and with several oblique folds. The species are widely distributed ; the fossil forms are chiefly found in the Tertiary strata. One species attains a great length.

E 967. The *Fasciolaria tulipa*, Linn.

Fig. Encycl. Méth. pl. 431. fig. 2.

Hab. West Indies.

Hunterian.

E 968. The *Fasciolaria trapezium*, Linn.

Fig. Encycl. Méth. pl. 431. fig. 3.

Hab. Indian Ocean.

Presented by Lord Valentia.

E 969. The *Fasciolaria filamentosa*, Lam.

Fig. Encycl. Méth. pl. 431. fig. 3.

Hab. Indian Ocean.

Hunterian.

Genus *CANCELLARIA*, Lam.

Cancellated shells, with a channelled aperture, and the columella with oblique folds. Species widely distributed ; the fossil ones occur in the Tertiary strata.

E 970. A species of *Cancellaria* allied to *C. scalarina*, Lam.

Hab. Gambia.

Purchased.

- E 971. The *Cancellaria reticulata*, Linn.

Fig. Reeve, Conch. Icon. pl. 1. fig. 3.

Hab. West Indies.

Presented by John Quekett.

Genus TURBINELLA, Lam.

The *Turbinellæ* are thick, solid shells, with a short spire, and the columella with prominent transverse folds. The species are widely distributed. The fossil forms occur in the Middle Tertiary strata.

- E 972. The *Turbinella scolymus*, Gmelin, sp.

Fig. Encycl. Méth. pl. 431 *bis*, fig. 2.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 973. The *Turbinella pyrum*, Linn. sp. The *T. pyrum*, or Shank Shell, is applied to various purposes. It is frequently carved by the Cingalese, and the reversed varieties are used by the priests for administering medicine. This shell is also cut into thin circular slices, which are subsequently fastened together, variously ornamented, and then worn as bracelets or armlets; at the death of the wearer they are thrown into the adjoining river.

Fig. Wood, Index Test. pl. 21. fig. 160.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 974. The *Turbinella ceramica*, Lam. (*Voluta*, Linn.)

Fig. D'Argenville, Conch. pl. 15. fig. *e*.

Hab. Moluccas.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 975. The *Turbinella cornigera*, Lam. (*Cynodonta*, Schum.)

Fig. Quoy, Voy. de l'Astrolabe, pl. 35. figs. 24-26.

Hab. Indian Ocean. Tongataboo.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 976. The *Turbinella pugillaris*, Lam. (*Voluta muricata*, Wood.)

Fig. Wood, Index Test. pl. 21. fig. 158.

Hab. West coast of America.

Hunterian.

- E 977. The *Turbinella cingulifera*, Lam.
Fig. Encycl. Méth. pl. 429. fig. 1.
Hab. West Indies. *Hunterian.*
- E 978. The *Turbinella fusus*, Sow.
Fig. Reeve, Conch. Icon. pl. 10. fig. 54.
Hab. Unrecorded. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 979. The *Turbinella striata*, Gray? *T. filosa*? Shub.
Fig. Kiener, Spec. des Coq. pl. 14. fig. 2.
Hab. Unrecorded. *Purchased.*
- E 980. The *Turbinella rustica*, Lam.
Fig. Quoy, Voy. de l'Astrolabe, pl. 35. figs. 20-23.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 981. The *Turbinella lineata*, Lam.
Fig. Quoy, Voy. de l'Astrolabe, pl. 35. figs. 14-16.
Hab. Southern Seas. *Hunterian.*
- E 982. The *Turbinella polygona*, Lam.
Fig. Encycl. Méth. pl. 423. fig. 1.
Hab. Australian Seas. *Hunterian.*
- E 983. The *Turbinella rapa*, Lam.
Fig. Encycl. Méth. pl. 436. fig. 1.
Hab. Indian Ocean. *Hunterian.*

Genus PYRULA, Lam.

The Fig Shells are widely distributed, inhabiting the seas of Ceylon, Australia, China, and the West Indies. The fossil species range from the Cretaceous strata.

- E 984. The *Pyrula vespertilio*, Lam. (*P. carnaria*).
Fig. Encycl. Méth. pl. 434. fig. 3.
Hab. Indian Ocean. *Hunterian.*

- E 985. The *Pyrula melongena*, Lam. (*Myristica*, Sw.)
Fig. Encycl. Méth. pl. 435. fig. 3.
Hab. The Antilles. *Hunterian.*
- E 986. The *Pyrula squamosa*, Lam. (*P. myristica*, Brug. ?)
Fig. Encycl. Méth. pl. 432. fig. 3 a, b.
Hab. Locality unrecorded. *Presented by Lord Valentia.*
- E 987. The *Pyrula patula*, Sow.
Hab. Pacific Ocean. *Presented by C. T. White, Esq.*
- E 988. A large and fine specimen of the *Pyrula patula*, Sow., with the epidermis upon it.
Fig. Lam. Anim. sans Vert. vol. ix. p. 522.
Hab. Pacific Ocean. *Presented.*
- E 989. The *Pyrula rapa*, Lam.
Fig. Reeve, Conch. Syst. vol. ii. pl. 236. fig. 3.
Hab. Indian Ocean. *Hunterian.*
- E 990. The *Pyrula ficus*, Lam.
Fig. Encycl. Méth. pl. 432. fig. 1.
Hab. Indian Ocean. *Hunterian.*
- E 991. The *Pyrula reticulata*, Lam.
Fig. Encycl. Méth. pl. 432. fig. 2.
Hab. Indian Ocean. *Purchased.*
- E 992. The *Pyrula nodosa*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 518.
Hab. Red Sea. *Presented by Lord Valentia.*

Genus *FUSUS*, Lam.

The recent species are widely distributed. The fossil species occur in the Upper Secondary, but principally in the Tertiary strata.

- E 993. The *Fusus proboscideus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 449.
Hab. Indian Ocean. *Purchased.*
- E 994. The *Fusus colus*, Linn.
Fig. Encycl. Méth. pl. 423. fig. 2.
Hab. Ceylon. *Hunterian.*
- E 995. The *Fusus morio*, Lam.
Fig. Encycl. Méth. pl. 430. fig. 3.
Hab. African coast. *Hunterian.*
- E 996. The *Fusus nodosus*, Martyn (*Fusus raphinus*, Lam. ; *Buccinum raifort*, Quoy).
Fig. Martyn, Conch. Univers. vol. i. fig. 5. Quoy, Voy. de l'Astrolabe, pl. 31. fig. 5.
Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*
- E 997. The *Fusus longissimus*, Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 443.
Hab. Indian Ocean. *Hunterian.*
- E 998. The *Fusus verruculatus*, Lam.
Fig. Encycl. Méth. pl. 429. fig. 7.
Hab. Locality unrecorded. *Hunterian.*
- E 999. The *Fusus tuberculatus*, Lam.
Fig. Encycl. Méth. pl. 424. fig. 4.
Hab. Indian Ocean. *Presented.*

Subgenus TROPHON, Montf.

- E 1000. The *Trophon Magellanicus*, Lam.
Fig. Encycl. Méth. pl. 419. fig. 4.
Hab. Straits of Magellan. *Presented by Capt. Sir E. Home, Bart., R.N.*

E 1001. A cancellated species of *Trophon*.

Hab. New Zealand.

Presented by Capt. Sir E. Home, Bart., R.N.

Subgenus *CHRYSDOMUS*, Swainson.

E 1002. The *Chrysodomus antiquus*, Müll., and var. *carinatus*. This species, commonly called the Red Whelk on the English coasts, and the Buckie in Scotland, is extensively used as an article of food. The empty shell is suspended and used as a lamp in Zetland.

This species, and the reversed variety (*F. contrarius*, Sow.), occur among the characteristic fossils of the Red Crag deposits of Essex; the reversed form is also found living on the coast of Spain.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 423. pl. 104.

Hab. Irish Sea and shores of Scotland.

Presented by John Quekett.

E 1003. The *Chrysodomus Islandicus*, Chemn.

Fig. Forbes and Hanley, Brit. Moll. vol. iii. p. 417. pl. 103. figs. 1-3.

Hab. This species is extensively distributed round the British coasts and in the North Seas, and also along the coast of North America. It is found fossil in the Crag deposits of Norfolk and Suffolk. *Presented.*

Family *Strombidæ*.

Shells with a more or less expanded or digitate lip, deeply notched with a sinus near the canal. Operculum claw-shaped, serrated.

Genus *PTEROCERA*, Lam.

In this genus the outer lip is expanded into several more or less long, channelled, or solid processes, the one near the spire forming the posterior canal. The recent species are chiefly restricted to the tropical seas; the fossil forms occur in the Oolitic and Cretaceous strata.

E 1004. A series of specimens of the Wild-Vine-root Pterocera, *Pterocera bryonia*, Chemn. (*P. truncata*, Lam.), illustrating the different stages of growth in the young state. The shell is volutiform, the outer lip thin and not expanded; as the shell increases in growth the outer lip becomes sinuous,

and finally is widely expanded over the summit of the spire, the margin becoming developed into six spreading tubular processes.

Fig. Reeve, Conch. Icon. pl. 1.

Hab. Society Islands, &c.

Hunterian, and presented.

- E 1005. A series of specimens of the Gouty Pterocera, *Pterocera chiragra*, Linn. Three adult specimens, and others illustrating various periods of growth. Two well-marked varieties of this species allied to *P. rugosa*.

Fig. Lam. Anim. sans Vert. vol. ix. p. 675.

Hab. Eastern Seas.

Presented by John Quekett.

- E 1006. A variety of the *Pterocera chiragra*, Linn., uncoated and polished.

Purchased.

- E 1007. Various specimens of the Spider Pterocera, *Pterocera lambis*, Linn., in a more or less adult state; one specimen with the epidermis removed, showing coloured markings of the under layer, and another with one of the processes bifid.

Fig. Reeve, Conch. Icon. pl. 5. fig. 8.

Hab. An abundant species in the Eastern Seas.

Presented by Capt. Sir E. Home, Bart., R.N.

- E 1008. The Orange Pterocera, *Pterocera aurantia*, Lam. This species differs from the other *Pterocerae* in the deep orange colouring of its interior and slender processes, some of which, in this specimen, are much curved.

Fig. Chemn. Conch. vol. x. pl. 158. figs. 1508, 1509.

Hab. Philippine Islands.

Hunterian.

- E 1009. The Wrinkled Pterocera, *Pterocera rugosa*, Sow. In one specimen the processes are not fully developed.

Fig. Sow. Thesaur. Conch. pl. 11. figs. 9, 10.

Hab. Society Islands.

Purchased.

- E 1010. The Elongate Pterocera, *Pterocera elongata*, Swainson. In this species the processes of the outer margin have a thickened festooned growth.

Fig. Swains. Exot. Conch. App. p. 32.

Hab. Eastern Seas.

Hunterian.

- E 1011. The Thousand-footed Pterocera, *Pterocera millepeda*, Linn. Distinguished by the numerous short processes of the outer lip.
Fig. Reeve, Conch. Icon. pl. 6. fig. 10.
Hab. Philippine Islands. *Purchased.*
- E 1012. The Scorpion Pterocera, *P. scorpio*, Linn. sp.
Fig. Reeve, Conch. Icon. pl. 3.
Hab. Philippines. *Purchased.*

Genus STROMBUS, Linn.

In this genus the expanded wing-like outer lip is simple, and not developed into channelled processes as in *Pterocera*.

- E 1013. A series of young and immature specimens of the Giant Strombus, *Strombus gigas*, Linn., in which the outer lip is thin and not expanded.
Fig. Sow. Thesaur. Conch. pl. 10. fig. 117.
Hab. West Indies.
This species, remarkable for the delicate pink colouring of the aperture, is largely imported for the manufacture of cameos.
- E 1014. The Goliath Strombus, *Strombus goliath*, Chemn.
Fig. Sow. Thesaur. Conch. pl. 10. fig. 118.
Hab. Southern Seas. *Hunterian.*
- E 1015. The Hawk-wing Strombus, *Strombus accipitrinus* (var.), Lam.
Fig. Lam. Anim. sans Vert. vol. ix. p. 687.
Hab. West Indies. *Hunterian.*
- E 1016. A series of specimens of the Three-horned Strombus, *Strombus tricornis*, Lam., in various stages of growth; one set with the epidermal covering, the other partly uncoated and showing the coloured markings.
Fig. Encycl. Méth. pl. 408. fig. 1, and pl. 409. fig. 2.
Hab. Red Sea. *Presented by Lord Valentia.*

- E 1017. A series of specimens of the Hunchback Strombus, *Strombus gibberulus*, Linn., of various sizes and conditions of growth.

Fig. Lam. Anim. sans Vert. vol. ix. p. 697.

Hab. Isle of Pines. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 1018. Two specimens of the Luhu Strombus, *Strombus Luhuanus*, Linn., coated with a brown velvety epidermis; the inner margin is remarkable for the dark purple border.

Fig. Sow. Conch. Thesaur. pl. 7. fig. 54.

Hab. Moluccas. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 1019. The Freckled Strombus, *Strombus lentiginosus*, Linn.

Fig. Sow. Thesaur. Conch. pl. 8. fig. 79.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

1020. The Armed Strombus, *Strombus pugilis*, Linn.

Fig. Sow. Thesaur. Conch. pl. 8. fig. 74.

Hab. West Indies. *Hunterian.*

- E 1021. The Partridge-wing Strombus, *Strombus canarium*, Linn.

Fig. Sow. Thesaur. Conch. pl. 8. figs. 69, 70.

Hab. Ceylon; Philippine Islands. *Hunterian.*

- E 1022. The Spotted Strombus, *Strombus guttatus*, Martini.

Fig. *Pugil guttatus lævis*, Mart. Conch. Cab. iii. p. 126. pl. 48. fig. 840.

S. auris-Dianæ, pars, Linn.

Hab. Philippine Islands; on the reefs in shallow water.

This shell is allied to *S. auris-Dianæ*, but it is not so roughly ribbed and tuberculated. It is remarkable for the deposit of enamel, which spreads over the inner margin and extends over the apex. *Hunterian.*

- E 1023. The Diana's-ear Strombus, *Strombus auris-Dianæ*, Linn.

Fig. Sow. Thesaur. Conch. pl. 9. figs. 101, 102.

Hab. Tongataboo. *Presented by Capt. Sir E. Home, Bart., R.N.*

- E 1024. The *Strombus Novæ-Zelandiæ*, Chemn. (*S. Pacificus*, Swains.)
Fig. Reeve, Conch. Icon. pl. 15. fig. 35.
Hab. New Zealand. Presented by Capt. Sir E. Home, Bart., R.N.
- E 1025. The *Strombus plicatus*, Lam. (*S. dentatus*, Linn.)
Fig. Sow. Thesaur. Conch. pl. 7. fig. 56.
Hab. Tongataboo. Presented by Capt. Sir E. Home, Bart., R.N.
- E 1026. Different varieties of the *Strombus mutabilis*, Swains. (*S. floridus*, Lam.)
Fig. Sow. Thesaur. Conch. pl. 7. figs. 40, 45, 46, 47, 49, 52.
Hab. New Zealand. Presented by Capt. Sir E. Home, Bart., R.N.
- E 1027. The *Strombus Mauritanus*, Lam. (*S. cylindricus*, Swains.)
Fig. Reeve, Conch. Icon. pl. 9. fig. 19.
Hab. Mauritius. Hunterian.
- E 1028. The *Strombus succinctus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 6. figs. 20, 21.
Hab. Philippine Islands, &c. Hunterian.
- E 1029. The *Strombus fasciatus*, Born (*S. lineatus*, Lam.).
Fig. Reeve, Conch. Icon. pl. 19. fig. 56.
Hab. Red Sea. Presented by Lord Valentia.
- E 1030. The *Strombus Campbelli*, Gray.
Fig. Gray, Cuv. Anim. Kingdom, Moll. pl. 25.
Hab. North Australia. Presented by Capt. Sir E. Home, Bart., R.N.
- E 1031. An immature specimen, partly broken, of the *Strombus vittatus*, Linn.
Fig. Sow. Thesaur. Conch. pl. 6. figs. 27-31.
Hab. Philippines. Hunterian.
- E 1032. The *Strombus laciniatus*, Chemn.
Fig. Reeve, Conch. Icon. pl. 11. fig. 35.
Hab. Philippines. Purchased.

E 1033. The *Strombus columba*, Lam.

Fig. Reeve, Conch. Icon. pl. 12. fig. 26.

Hab. Zanzibar.

Presented by Capt. Sir E. Home, Bart., R.N.

E 1034. The *Strombus pulchellus*?, Reeve.

Fig. Reeve, Conch. Icon. pl. 19. fig. 52.

Hab. Philippines.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus ROSTELLARIA, Lam.

E 1035. Three specimens of the *Rostellaria curvirostrum*, Gmel.

Fig. Sow. Thesaur. Conch. pl. 5. fig. 9.

Hab. Moluccas and Red Sea.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus SERAPHS, Montfort (*Terebellum*, Lam.).

E 1036. The *Seraphs terebellum*, Linn. sp. (*Ter. subulatum*, Lam.). This species is the only living type of the genus at present known. The animal has an operculum like that of *Strombus*, simple eye pedicels, but without tentacles. The five fossil species occur in the Eocene and other Tertiary strata.

Fig. Tarriere, Encycl. Méth. tab. 360. fig. 1 *a, b*.

Hab. China. Philippine Islands.

Hunterian, and presented.

Opercula.

Many species of Gasteropoda develop an *operculum* or lid on a particular lobe of the foot; it may be composed either of layers of horn, or of dense shelly substance, the principal office of which is to close the mouth of the shell when the animal retires within it. By some authorities the operculum is considered to be the analogue of the dextral valve of the Conchifera, and is developed in the embryo whilst within the egg, and its starting-point is termed the nucleus. The operculum always exhibits more or less of a spiral development: in some cases the spirals are numerous and nearly concentric; in others, and these the most common, the new matter is added principally on one side, and the nucleus is then very excentric. The spirals are invariably sinistral in dextral shells.

A. Opercula composed of horny material.

E 1037. Three opercula of *Vermetus giganteus*. *Purchased.*

E 1038. Two opercula of the Common Whelk, *Buccinum undatum*.
Presented by John Quekett.

E 1039. Five opercula of a species of *Trochus*. *Hunterian.*

E 1040. Two large opercula of a species of *Triton*.
Presented by Capt. Sir E. Home, Bart., R.N.

E 1041. An elongated operculum of *Strombus gigas*.

B. Calcareous opercula.

E 1042. A series of opercula of *Turbo nodosus*.
Presented by Capt. Sir E. Home, Bart., R.N.

E 1043. Two opercula of *Turbo Cookii*.
Presented by Capt. Sir E. Home, Bart., R.N.

E 1044. An operculum of *Turbo torquatus*.
Presented by Capt. Sir E. Home, Bart., R.N.

E 1045. An operculum of *Turbo Sarmaticus*. *Hunterian.*

E 1046. An operculum of *Turbo marmoratus*.
Presented by Capt. Sir E. Home, Bart., R.N.

E 1047. Two large opercula of *Turbo marmoratus*.
Presented by Robert Brown, Esq., F.R.S.

E 1048. A large operculum of a species of *Turbo*.
Presented by J. T. Streeter, Esq., F.R.C.S.E.

E 1049. A series of opercula of shells, obtained principally from the Southern Seas, but the species of which are difficult to determine. *Presented.*

E 1050. The operculum of *Natica canrena*. *Hunterian.*

Class VII. CEPHALOPODA.

The Cephalopods are symmetrical Molluscs, having the right and left sides equally developed; the shell is either straight, as in many of the 'Naked Cephalopods,' or coiled in a vertical plane. In the majority of living forms the shell is internal, the Nautilus and Argonaut alone having external shells.

Order TETRABRANCHIATA.

Shell external, chambered and siphuncled; siphuncle central or marginal; branchiæ four.

Family *Nautilidæ*.

Shell involute; aperture and sutures simple; siphuncle central; inner layers nacreous, outer ones porcellaneous.

Genus NAUTILUS, Breynius.

The recent species inhabit the seas of China, the Pacific and Indian Oceans, and the Persian Gulf. The extinct species occur in all the fossiliferous strata.

E 1051. Six specimens of the Pearly Nautilus, *Nautilus pompilius*, Linn.: one specimen partially uncoated; another, from which the outer layer has been removed, showing the nacreous character of the inner layer.

Fig. Encycl. Méth. pl. 471. fig. 3.

Hab. Indian Ocean.

Hunterian, and presented.

E 1052. A bisected specimen of the same species, showing the simple septa, the central siphuncular perforation, and a portion of the connected siphuncle remaining in some of the septa.

Purchased.

E 1053. The *Nautilus umbilicatus*, Chemnitz.

Fig. Chemn. Conch. vol. x. tab. 137. fig. 1274.

Hab. Indian Ocean.

Purchased.

E 1054. The *Nautilus macromphalus*, Sow.

Fig. Proc. Zool. Soc.

Hab. Pacific.

Purchased.

Order DIBRANCHIATA.

Shell horny or shelly, with or without septa, generally internal, except in the Argonauta; branchiæ two.

Section I. OCTOPODA.

Shell external and one-chambered, or internal and rudimentary; arms eight; suckers sessile.

Genus OCTOPUS, Cuvier.

E 1055. A species of *Octopus*, mounted in fluid.

Hab. Britain.

Prepared by Mr. H. Goadby.

Genus ARGONAUTA, Linn.

E 1056. A specimen of the female of the Paper Nautilus, *Argonauta argo*, Linn., showing the animal with the two dorsal arms or mantle exposed, and investing the thin and translucent shell, and the other tentacular arms hanging over the side.

Fig. Reeve, Conch. Syst. vol. ii. p. 305. pl. 300.

Hab. Mediterranean.

Presented by Madame Jeannette Power.

E 1057. Three specimens of the *Argonauta argo*, Linn.

Fig. Lam. Anim. sans Vert. vol. xi. p. 355.

Hab. Mediterranean.

Hunterian.

E 1058. Two specimens of *Argonauta nodosa*, Solander, MS.

Fig. D'Orbigny, Moll. Viv. et Foss. vol. i. p. 231.

Hab. Indian Seas.

Presented.

E 1059. Two specimens of *Argonauta hians*, Solander, MS.

Fig. D'Orbigny, Paléont. Univ. pl. 2. figs. 6-10.

Hab. Chinese Seas.

Purchased.

Section II. DECAPODA.

Shell internal, horny or shelly, sometimes spiral and chambered ; arms eight ; tentacles two ; suckers pedunculate.

Family *Spirulidæ*.

Shell nacreous, discoidal ; volutions separate, chambered ; siphuncle internal.

Genus SPIRULA, Lam.

E 1060. Various specimens of *Spirula Peronii*, Lam. (*Spirula Australis*.)

Fig. Encycl. Méth. pl. 465. fig. 5.

Hab. Australian Seas. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family *Sepiadæ*.

Shell a broad calcareous laminated plate, terminating in an apex or mucro.

Genus SEPIA, Linn.

The recent species are widely distributed. Fossil species occur in the Lias and Oxford clays.

E 1061. The cuttle-bone, or internal shell of the *Sepia officinalis*, Linn.

Fig. Encycl. Méth. pl. 76. figs. 5-7.

Hab. British coasts. *Hunterian.*

E 1062. An ovate shell, with a prominent mucro, of a species of *Sepia*.

Hab. New South Wales. *Presented by the Rev. F. N. Wilton.*

Family *Teuthidæ*.

Shell horny, thin, consisting of a shaft and two lateral wings.

Genus SEPIOLA, Leach.

E 1063. The *Sepiola Atlantica*, D'Orb. (*Sepia sepiola*, Linn.)

Fig. Encycl. Méth. pl. 77. fig. 3.

Hab. Firth of Forth ; Atlantic. *Prepared by Mr. H. Goadby.*

Genus *LOLIGO*, Lam., or *Calamary*.

The Calamaries, or Squids, inhabit the seas from Norway to New Zealand. The common species is frequently used for bait on the southern coasts. In the West Indies (Cuba) some species are eaten, and considered a great delicacy.

- E 1064. The horny internal pen of the *Loligo vulgaris*, Lam. (*Sepia loligo*, Linn.)
The specimen is about 20 inches in length.
Fig. Quekett's Lectures on Histology, vol. ii. p. 339.
Hab. South coast of England. *Presented by Mrs. Robinson.*

- E 1065. A small species of *Loligo*, mounted in fluid.
Prepared by Mr. H. Goadby.

Genus *ONYCHOTEUTHIS*.

- E 1066. The lower portion of the body, with the two fins, of a large Calamary, *Onychoteuthis Banksii*.
This animal was about 6 feet in length, and taken by Sir Joseph Banks and Dr. Solander, floating on the sea off Cape Horn. *Hunterian.*

Sections of Shells.

- E 1067. A specimen of *Fasciolaria* which has been divided transversely at three different parts, in order to display the mode in which the several layers of shelly matter are arranged in the oldest as well as in the last formed portions of the shell. *Purchased.*
- E 1068. A species of *Turbinella* which has been divided transversely at two different points; it shows the several layers of which the shell is composed, and how much of each is employed in the formation of the spinous processes. *Purchased.*
- E 1069. A species of *Triton* divided transversely at two different points; the

several layers of which the shell is composed are well shown, and also that the spines are principally, if not entirely, made up of the outer layer.

Purchased.

E 1070. A *Pyrula*, divided transversely at two points, about half an inch distant from each other: it will be noticed that the two inner layers are very thin, and that the spines are principally formed from the outer one.

Purchased.

E 1071. The *Pterocera rugosa*, divided vertically. The section includes one of the spines, which is quite solid, and entirely formed of the outer layer of the shell; it also shows the size of the columella in the four great epochs of growth of the shell.

Purchased.

E 1072. A species of *Conus* which has been divided transversely within half an inch of the apex; it shows that the outer whorls of the shell are consolidated, and hardly any trace left of the individual layers composing them.

Purchased.

E 1073. The two valves of *Spondylus varians*, divided vertically; showing that the thick parts nearest the hinge in the lower valve are not solid, as at first sight might be supposed, but made up of a series of layers about an eighth of an inch distant from each other; but in the upper valve the layers, although as numerous as in the lower, are nearly all consolidated.

Purchased.

E 1074. The two valves of a Common Oyster, *Ostrea edulis*, Linn., divided vertically. The animal was of considerable age, though not well nourished, and each new layer of shell formed by the mantle is distinct, but the prismatic layer external to it is more or less imperfectly formed.

Presented by John Quekett.

E 1075. The two valves of a large species of *Spondylus*; they have been divided vertically, and show that each has gone on gradually increasing in size,

and being well nourished, all the layers of the shell are developed and converted into a solid mass, although traces still remain of the individual layers.

Purchased.

- E 1076. A specimen of *Turbo marmoratus*, from which a slice has been taken in a vertical direction. Although the greater part of the outer coating has been removed, still enough remains in various parts of the section to show how much of the shell is formed by this white outer layer.

Hunterian.

- E 1077. The *Cassis Madagascarensis* ?, from which a series of sections of the outer coating have been taken in order to display the internal structure, which shows that the shell itself is made up of six distinct stages of growth.

Hunterian.

- E 1078. The *Cassis Madagascarensis* ?, similarly cut, in order to display the internal structure.

Hunterian.

- E 1079. A smaller species of *Cassis*, which has had several portions of its outer coating removed ; it shows that the entire shell is made up of five distinct stages of growth.

Hunterian.

- E 1080. A specimen of *Conus millepunctatus*, from which a vertical section has been removed ; it shows the columella, but most of the thin layers joining it have been broken away.

Purchased.

- E 1081. The *Rostellaria curvirostrum* ; it has been vertically bisected, and one of the halves has had a small portion of its outer layers removed. The whole course of the columella is well shown in one of the sections, and it is solid throughout.

Hunterian.

- E 1082. The *Cerithium telescopium*, divided vertically, showing the spiral condition of the columella, and the numerous plates connected with it.

Purchased.

- E 1083. The *Cerithium telescopium*, from which the outer layers of shell have been removed in three distinct situations ; it shows the columella, and the mode of connexion of its plates with it. *Purchased.*
- E 1084. The *Cerithium telescopium*, from which all the outer layers of shell have been removed, and nothing remains but the columella and its spiral plates ; on a careful examination of the latter, it may easily be seen of how many layers each is composed. *Purchased.*
- E 1085. The *Turritella duplicata*, divided vertically, showing that the columella is not so strongly developed as the plates connected with it. *Hunterian.*
- E 1086. The *Terebra maculata*, divided vertically, showing a well-developed columella, and the stout spiral plates connected with it. *Hunterian.*
- E 1087. The *Ovulum gibbosum*, from which rather more than half of the upper convex portion has been removed ; it shows clearly the parts which have severally formed the interior of the shell, the columella, and the inner volutions ; no traces of a coloured layer are present, except on the inner layer of the last-developed portion of the lip. *Purchased.*
- E 1088. Three specimens of *Cypræa tigris*, all of which have been divided transversely, showing the beautiful curved arrangement of the volutions. *Purchased.*
- E 1089. A specimen of *Cypræa*, which has been divided longitudinally ; one section shows the columella and volutions, the other the purple colour pervading the greater portion of the inner layer. *Purchased.*
- E 1090. A portion of the columella and volutions of a species of *Cypræa*, detached from the outer portion of the shell. *Purchased.*
- E 1091. A species of *Murex*, from which the greater portion of the outer layers of shell have been removed ; it shows the spiral condition of the columella and the groove surrounding it, which is continuous from the apex to the mouth. *Hunterian.*

- E 1092. A species of *Turbinella*, from which a considerable portion of the outer layers of shell have been removed to display the columella, which is surrounded in all its course by three raised spirals, which are the remains of plates once connected with it, but have nearly all been absorbed.

Hunterian.

- E 1093. The Common Whelk, *Buccinum undatum*, from which nearly one-half of the shell has been removed by vertical section; it shows the whole course of the columella, which is spiral and solid throughout.

Purchased.

- E 1094. A small species of *Triton*, which has been divided vertically a little on one side of the central line; one half exhibits the columella, which is hollow throughout.

Hunterian.

- E 1095. A specimen of *Trochus*, probably *T. obeliscus*, from which all the outer layers of shell have been removed, to show the columella and the beautiful spiral arrangement of the plate connected with it.

Purchased.

- E 1096. An uncoated specimen of *Nautilus pompilius*, vertically bisected to show the several chambers in its interior, and the remains of the siphunculated tube connecting them.

Purchased.

- E 1097. A small species of *Cassis*, divided vertically; it shows the columella and its plates, the latter being beautifully spiral throughout.

Purchased.

- E 1098. The *Pterocera lambis*, from which a wedge-shaped piece has been removed at the back, to show the series of funnels formed by the columella and its plates.

Hunterian.

Shells illustrating the method of repair after injury.

- E 1099. One of the valves of a species of *Pinna*, which has been fractured in three directions; a large amount both of the prismatic and nacreous shell-matter has been thrown out over the cracks, so that these parts resemble very much the cases of Annelides.

Presented by John Quekett.

- E 1100. The shell of a species of *Haliotis*, which has been considerably fractured; the parts are now all firmly united by nacreous material principally, and a portion of the missing shell is in process of reparation, its place being supplied by horny matter. *Hunterian.*
- E 1101. A species of *Turritella*, which has been fractured near the mouth, and the broken parts firmly united. *Hunterian.*
- E 1102. The *Turbinella lineata*, which has been fractured near the mouth: the broken parts are firmly repaired; but not being in proper position, a second mouth appears to be formed by them. *Hunterian.*
- E 1103. The *Strombus canarium*, which has had its mouth fractured, and is now firmly repaired. *Presented.*
- E 1104. A species of *Dolium*, which has received an injury on its lip; this is firmly repaired, and a layer of nacreous material covers the inner edges of the fracture. *Purchased.*
- E 1105. The shell of a species of *Harpa*, which has had its lip extensively fractured; and the restoration appears to have been accomplished by a considerable amount of new shell, which has neither the markings nor the colour of the original. *Purchased.*
- E 1106. A species of *Conus*, which has been fractured near the lip; it has been repaired, and the shell nearest the line of fracture is of lighter colour than the other parts of the specimen. *Hunterian.*
- E 1107. The *Fusus Islandicus*, which has been fractured in three different directions, and all firmly united. *Purchased.*
- E 1108. The *Fusus antiquus*, which has been fractured in two different directions, both of which are firmly united. The square hole appears to have been repaired by a new growth of shell. *Hunterian.*

E 1109. Six specimens of the Paper Nautilus, *Argonauta Argo*, the shells of which have been more or less injured, and all have undergone the process of repair. *Presented by Madame Jeannette Power.*

It was at one time supposed that the animal inhabiting these fragile shells was not the true fabricator of the shell ; to put this to the test, Madame Power performed a series of experiments on the living animal, and found, as shown by the above specimens, that the restorations of the shell precisely corresponded with those of the original. The results of these experiments of Madame Power will be found in a paper contributed to the Zoological Society by Professor Owen in February 1839.

Structure of Pearls.

In many species of Mollusca are found certain oval or globular masses of nacreous material, known as Pearls ; these are said to occur either in the mantle or ovarium of the animal, or firmly attached to some part of the internal surface of the shell. Pearls are most commonly found in Oysters and Mussels, and not unfrequently in other shells ; they are more abundant in shells from certain localities than from others, and the fisheries of the coast of Ceylon and of Olmutz in the Persian Gulf are said to produce the finest specimens. The most valuable Pearls are obtained from a large oyster known as *Meleagrina margaritifera*, and from a mussel termed *Alasmodon margaritifera* ; they are also commonly found in the mussels of many rivers both in Great Britain and Ireland ; but British Pearls are not so highly prized as those from the East. Pearls are not exclusively confined to particular species of oysters or mussels, but in some localities are as abundant in the commoner kinds as in the rarer species of these animals : the quality of the Pearl depends upon its size, roundness, and brilliancy ; but it is only in those shells having a true nacreous layer that the finest specimens can be obtained ; those occurring in the ordinary edible oysters and mussels are always more or less dull in appearance, in consequence of the internal layer of their shells being of the subnacreous variety, and their Pearls not unfrequently composed of prismatic cellular structure instead of nacre. Various opinions have long been entertained as to the mode in which Pearls are formed ; the general supposition is that they are developed upon a nucleus

composed either of a blighted ovum or of a foreign body: by some it is considered that the Pearl is the result of disease, and by others that the animal, being cognizant of the attacks of the Whelk or other boring Gasteropod, immediately sets to work and secretes a pearly mass to stop the hole; this latter conclusion would only apply to such Pearls as are attached to the shell. It has been found, however, that Pearls are generally developed upon a nucleus, and that in the prismatic or non-nacreous variety the nucleus consists either of a foreign body, or of a portion of the brown horny layer found on the lip of the shell; but in no case yet examined has an ovum been found.

Pearls, as shown by specimens Nos. E 1145, 1146, 1147, &c., may be produced artificially.

Mr. Hunter paid some attention to the development of Pearls, and all those hereafter described under his name were originally placed amongst the calculi and other concretions.

Animal matter of Shell.

- E 1110. Four valves of the shell of the Common Oyster, *Ostrea edulis*, which have been deprived of their earthy matter by long maceration in weak hydrochloric acid. *Presented by Sir Anthony Carlisle, F.R.S.*

Numerous specimens in illustration of the animal basis of coral and shell will be found in the Physiological Series.

Earthy matter of Shell.

- E 1111. The two valves of the shell of the Common Oyster, which have been deprived of their animal matter by long exposure to a red heat. The true shape of the valves is preserved both in this and in the preceding specimen. *Presented by Sir Anthony Carlisle, F.R.S.*

Shells thickened in particular parts, to withstand the action of boring animals.

- E 1112. A series of fragments of the valves of the large Pearl Oyster, *Meleagrina*

margaritifera, all of which have been more or less thickened in certain situations to withstand the assaults of boring animals.

Presented by Sir Anthony Carlisle, F.R.S.

- E 1113. A portion of one of the valves of a species of *Tridacna*, which is much thickened on its inner surface, in order to withstand the action of boring animals.

Presented by Sir Anthony Carlisle, F.R.S.

- E 1114. Portions of the shell of the Common Oyster, which have been considerably thickened in some parts to withstand the action of boring animals.

Presented by Dr. W. E. Leach.

- E 1115. One of the valves of the Common Oyster, *Ostrea edulis*, near the inner centre of which is a small hollow pearly projection about as large as a pea.

Hunterian.

- E 1116. The flattened valve of a Common Oyster, which has a projection of shelly matter arising from the centre of the muscular impression.

Presented by John Quekett.

Oyster Pearls.

- E 1117. A series of Pearly concretions from the Common Oyster ; they are of different shapes, and vary much in their lustre.

Hunterian.

- E 1118. A series of small pearls termed Seed Pearls ; they have little or no lustre, and were obtained from the Common Oyster, *Ostrea edulis*.

Hunterian.

- E 1119. Another series of Seed Pearls without lustre, probably obtained from the Common Oyster.

Hunterian.

- E 1120. A series of Seed Pearls of smaller size and more brilliant lustre than the two preceding, and probably derived from a different species of Oyster.

Hunterian.

- E 1121. A few specimens of Seed Pearls, probably from one of the Oriental species of Oyster, all of which have been perforated. *Hunterian.*
- E 1122. Seven specimens of Pearly concretions of a dull yellowish-white appearance; three of them are of spherical figure, the rest more or less irregular, and were in all probability obtained from the Common Oyster. *Hunterian.*
- E 1123. Nine specimens of Pearls from the Common Oyster, having somewhat the appearance of china; they are all of more or less rounded figure, exceedingly dense, and capable of receiving a fine polish. *Hunterian.*
- E 1124. Two specimens of the same china-like Pearls which have been ground down and polished on one side: one of them exhibits a trace of a nucleus, round which concentric laminæ are visible; the other is more transparent, and the central part has an opalescent appearance. *Hunterian.*
- E 1125. Two Pearls of a pink colour, formed probably by a univalve shell, *Turbinella scolymus*; one of them is of a richer pink than the other, and has a trace of a pedicle of attachment at one end.
Hab. West Indies. *Presented by J. A. Carter, Esq.*
- E 1126. An oval Pearl, manufactured in imitation of the two above, from the lip of a univalve shell. These artificial Pearls may be known from the real ones by their want of lustre, and the concentric markings showing the stages of growth of the shell.
Hab. West Indies. *Presented by J. A. Carter, Esq.*

The true Pink Pearls were in much request with the jewellers of Paris but almost suddenly they diminished greatly in value, owing to the manufacture of artificial substitutes like the above; when, however, the imposition was discovered, the public were made acquainted with an easy method of distinguishing the spurious from the real, by the lines of growth above referred to.

E 1127. A small flattened Pearl of a pinkish hue, obtained from the *Modiola vulgaris*.

Hab. Frith of Forth.

Presented by John Quekett.

Mussel Pearls.

E 1128. A series of small Seed Pearls of a transparent pinkish hue, obtained from a species of Mussel. *Hunterian.*

E 1129. A series of Pearls of various sizes, mostly of irregular figure, and of a dark brown colour; they have evidently been developed in the outer coloured layer of a species of Mussel. *Hunterian.*

E 1130. A series of Pearls of irregular figure and dark brown colour; they were developed from the outer layers of the shell of the true Pearl Mussel, *Alasmodon margaritifera*. Some of them have a pearly lustre, which is due to their having projected a little way within the shell. Such pearls, when divided vertically, would have the appearance seen in pp. E 1133.

Hab. River Tay, Perthshire.

Presented by John Quekett.

E 1131. A series of Pearls, chiefly from the *Alasmodon margaritifera*, mounted so as to display those parts covered with nacreous matter. *Hunterian.*

E 1132. A series of valves of the *Alasmodon margaritifera*, showing Pearls in different stages of development.

Hab. River Tay, Perthshire.

Presented by John Quekett.

E 1133. Five sections of Pearls, probably from the *Alasmodon margaritifera*, or British Pearl Mussel; the great bulk of each is made up of brown prismatic material, showing that it was originally formed on the outer layer of the shell, and as they increased in size they projected within reach of the mantle and became coated with nacre.

E 1134. The shell of a species of *Unio*, having numerous minute pearly concretions attached to both valves. *Presented by John Quekett.*

- E 1135. A valve of a Swan Mussel, attached to which may be seen several rounded concretions ; these have been formed either to resist the action of boring animals, or as a covering to foreign matter introduced from without. *Hunterian.*
- E 1136. Valves of the Common Edible Mussel, *Mytilus edulis*, in each of which several rounded concretions are present ; and in one of them, which belonged to the Hunterian Collection, may be seen three rounded masses, each having a hole in its centre. *Presented by John Quekett.*
- E 1137. One of the valves of the shell of a Pearl Oyster, *Avicula alba*, having a pearly secretion developed upon the muscular impression : the part on the side where the tendon was attached is rougher and less brilliant than the other, which is smooth and pearly. *Presented by John Quekett.*
- E 1138. A series of masses of shelly matter of irregular figure, having on one surface the impressions of shell-structure, and on the other a nacreous layer of a yellowish tint. *Hunterian.*
- E 1139. A mass of white pearly matter, probably from the Common Oyster. It shows at one end some points by which it was attached to the shell, and at the other end it is expanded, and resembles in a striking manner an incisor tooth of an ox. *Hunterian.*
- E 1140. An Oriental Pearl, divided vertically and mounted as a pin. When the cut surface is examined, a small circular cavity, having a nacreous lining, is seen in the centre ; this is the *nucleus* described by Sir Everard Home in the Phil. Trans. *Presented by Sir E. Home, Bart., F.R.S.*
- E 1141. A vertical section of a smaller Oriental Pearl ; the cut surface has been polished, and the so-called nucleus may still be seen beneath the smooth surface.
Fig. Phil. Trans. vol. cxvi. p. 359, pl. 13. fig. 6.
Presented by Sir E. Home, Bart., F.R.S.

- E 1142. Two rounded masses of pearly material joined together, which have been formed over a lump of dark brown substance, like the periostracum of the lip of the shell. They are probably from the true Pearl Oyster.

Hunterian.

- E 1143. Six specimens of irregularly shaped Pearls and pearly concretions, some of which have a considerable degree of lustre, and have been formerly pierced and mounted. Two of the specimens are principally composed of clusters of minute Pearls.

Hunterian.

- E 1144. Two large but very irregularly formed masses of pearly concretion, which have been rudely mounted as pendants for ear-rings. *Hunterian.*

Pearls produced artificially.

- E 1145. One of the valves of a *Unio*, probably *U. plicatus*, on the inner surface of which, five equal-sized, well-formed pearls have been ingeniously produced by the introduction, during the life of the animal, of an equal number of small, silver, anchor-like wires, each armed with a bead of mother-of-pearl. The irritation produced on the animal has induced an extra secretion of nacre to defend the soft parts, and the beads on the wires form the nuclei of the Pearls.

This specimen was formerly in the Portland Collection, and was purchased at the sale in 1786, in the sale catalogue of which it is thus described :—"34th day, June 1st, 1786. Lot 3690. An odd valve of *Mytilus plicatus*: and part of another with a row of four pearls within it, formed upon wires artfully introduced while the animal was living, by the Chinese. [An odd valve of another species of freshwater mussel from China. Very rare. £0 11s. 0d.]"

Hunterian.

- E 1146. A pair of valves of a *Unio*, in which twenty-three thin plates of a white metal, each stamped to represent a Chinese deity or joss (Buddha in a sitting posture), have been introduced; twelve of these are on one valve and eleven on the other. They are all coated with a thin layer of nacreous material. When sufficient nacreous material is deposited on the tin the

shell is cut up, and the individual josses are cemented by their tin surfaces to a block of mother-of-pearl about one-eighth of an inch in thickness, by which they can be mounted into ornaments, such as brooches, pins, and even buttons.

Hab. From the neighbourhood of Ningpo, China.

Presented by J. G. Lockhart, Esq., F.R.C.S.

- E 1147. A single valve of a larger and thicker species of Mussel, on the internal surface of which eleven imperfectly formed pearly concretions occur: the greater portion of this nacreous layer is incomplete, and of a brown colour, showing that it has not yet received its full amount of calcareous or pearly material.

Hab. China.

Presented by J. G. Lockhart, Esq. F.R.C.S.

- E 1148. A portion of one of the valves of the shell of a Mussel, to which a globular mass of mother-of-pearl has been attached, and a layer of true pearl deposited over it. The specimen has been divided vertically, and one half mounted on a gold pin.

If either of the cut surfaces be examined, the pearly layer will be found only as a thin covering to the outer surface. This is evidently one of those Pearls artificially produced by the Chinese, and has a similar structure to one of the Pearls in the specimen number, E 1145.

Presented by Sir E. Home, Bart., F.R.S.

- E 1149. Portions of two Pearls in close approximation, which have been produced by attaching globular pieces of mother-of-pearl to one of the valves of a Mussel.

A portion of the shell remains, and also a trace of one of the holes through which the silver wire passed, by which the sphere of mother-of-pearl was attached.

Presented by Sir E. Home, Bart., F.R.S.

Spurious Pearls.

- E 1150. A pendant of an Ear-ring, which on a cursory examination might appear to be a very large pearl, but is evidently factitious, though a very excellent imitation.

Hunterian.

E 1151. A series of Artificial Pearls of various sizes ; they are thin globes of glass, lined with a pearl-like layer composed of some adhesive matter, with which the silvery material of the scales of the Bleak or Dace has been mixed. *Presented by John Quekett.*

E 1152. A series of specimens of sandy matter from the coast near Sydney, New South Wales ; the greater part of which is made up of comminuted pearly shells. *Presented by Mr. W. Yeates.*

E 1153. A large hollow mass of white shelly material thrown out like a pearl from the valve, probably of a species of *Tridacna*. *Purchased.*

C A T A L O G U E.

R E C E N T I N V E R T E B R A T A.

Subkingdom ARTICULATA.

THE animals composing the subkingdom *Articulata* are characterized by having the body enclosed in a tunic or integument, consisting of a series of rings, segments, or joints “articulated” together by a flexible membrane. The segments are disposed in longitudinal rows, and in some of the orders, presently to be described, are nearly of the same form throughout the body, whilst in others every segment is dissimilar to the one preceding it. In some of the Articulata, as the Entozoa, the firmest portion of the body is nothing more than a pellucid membrane; in the Insects, however, it is composed of a horny material, whilst in the higher forms of Crustacea and Cirripedia it is made up of shelly tissue, very like that which is characteristic of the Conchiferous Mollusca. According to modern classification, the Articulata are divided into eight classes, as follows:—*Entozoa*, *Rotifera*, *Annelida*, *Myriapoda*, *Insecta*, *Crustacea*, *Cirripedia*, and *Arachnida*; of these the Insecta are far the most numerous, and are usually the first to be described; of the Entozoa and Rotifera there are no examples in this division of the Collection.

Class I. INSECTA.

The class Insecta is not only far more extensive than any other included in the animal kingdom, but is said to contain nearly as many species as all the other classes put together. Insects are now usually divided into eleven orders, among which the Myriapods were formerly included ; but as these have more than six legs, and the body is not divided into head, thorax, and abdomen, they have been placed in a separate class. The orders are *Thysanura*, *Parasita*, *Suctoria*, *Coleoptera*, *Orthoptera*, *Hemiptera*, *Neuroptera*, *Hymenoptera*, *Lepidoptera*, *Rhipiptera*, and *Diptera*. The individuals composing these orders are all characterized by having “ three pairs of jointed legs ; one pair of antennæ ; body divided into head, thorax, and abdomen ; breathing performed by two parallel air-pipes opening by numerous spiracles on each side ; undergoing complex metamorphosis.”

MANDIBULATA.

Order COLEOPTERA. Beetles.

Section PENTAMERA.

Group GEODEPHAGA. Ground Carnivorous Beetles.

F 1. The Common Tiger Beetle, *Cicindela campestris*, Linn.

Fig. Panzer, Fauna Insecta Germanica, pl. 85. fig. 3. Linn. Faun. Suec.
p. 746.

Hab. Europe.

Hunterian.

F 2. The *Cicindela vulgaris*, Say.

Fig. Emmons, New York, pl. 17. fig. 12.

Hab. North America.

Hunterian.

F 3. The *Cicindela marginata*, Fabr.

Fig. Leconte's Cicindelidæ, U.S. Say's Amer. Ent. t. 13.

Hab. North America.

Hunterian.

F 4. The *Cicindela punctulata*, Fabr.?*Fig.* Say, Amer. Phil. Trans. vol. i. tab. 13.*Hab.* North America.*Hunterian.*F 5. The *Anthia tabida*, Auct.*Fig.* Olivier, tab. 2. fig. 17. Fabr. Syst. El. i. 223.*Hab.* Cape of Good Hope.*Hunterian.*F 6. The *Anthia sex-guttata*, Fabr.*Fig.* Donovan, Ins. Ind. Oliv. t. iii. tab. 1. fig. 6.*Hab.* East Indies.*Hunterian.*F 7. The *Brachinus cyanipennis*, Say?*Fig.* Say, Amer. Entomol.*Hab.* North America.*Hunterian.*F 8. The *Pamborus alternans*, Latr.*Fig.* Lacordaire, Col. pl. 2. fig. 5.*Hab.* Australia.*Hunterian.*F 9. The *Carabus prodigus*, Erichs. (*Apotomoplerus*, Hope.)*Fig.* Nov. Act. Acad. Cur. xvi. Suppl.*Hab.* China.*Hunterian.*F 10. The *Carabus monilis*, Fabr.*Fig.* Panzer, F. I. Germ. 108. fig. 1.*Hab.* British Islands.*Hunterian.*F 11. The *Calosoma calidum*, Fabr.*Fig.* Emmons, Insects of New York, tab. 21. fig. 15.*Hab.* North America.*Hunterian.*F 12. The *Omalosoma Vigorsii*, Hope.*Fig.* Hope, Man. Col. Gory, Ann. Soc. Ent. Fr. ii. 223.*Hab.* Australia.*Hunterian.*

- F 13. The *Steropus madidus*, Stephens.
Fig. Sturm, D. F. pl. 112. Stephens, Manual, p. 33.
Hab. British Islands. *Hunterian.*
- F 14. The *Feronia picimana*, Duftsch. sp.
Fig. Sturm, D. F. pl. 138. *Hunterian.*
- F 15. The *Harpalus æneus*, Fabr.
Fig. Panzer, F. I. Germ. 85. fig. 4.
Hab. British Islands. *Hunterian.*
- F 16 The *Amara lucida*, Steph.
Fig. Dej. Icon. iii. pl. 161. (*A. familiaris*.)
Hab. British Islands. *Hunterian.*
- F 17. The *Argutor vernalis*, Steph.
Fig. Dej. Icon. 3. pl. 129. Steph. Man. 30.
Hab. British Islands. *Hunterian.*
- F 18. The *Pæcilus versicolor*, Sturm, sp. (*Pæcilus cupreus*, var.)
Fig. Sturm, D. F. 5. 94.
Hab. British Islands. *Hunterian.*
- F 19. The *Pangus caliginosus*, Fabr.
Fig. Emmons, Insects of New York, pl. 10. fig. 7. Fabricius, S. E. i.
188.
Hab. North America *Hunterian.*
- F 20. The *Dromius quadrimaculatus*, Linn. sp.
Fig. Sturm, D. F. 7. 33.
Hab. British Islands. *Hunterian.*
- F 21. The *Notiophilus aquaticus*, Linn. sp.
Fig. Sturm, D. F. 7. 142.
Hab. British Islands. *Hunterian.*

Group HYDRADEPHAGA. Water Carnivorous Beetles.

- F 22. The *Cybister lævigatus*, Oliv. (*Dytiscus lævigatus*, Linn.)
Fig. Oliv. tab. 3. fig. 23.
Hab. South America. *Hunterian.*
- F 23. The *Dineutes vittatus* (*Gyrinus*), Germar.
Fig. Aubé, Spec. Gen. Col.
Hab. North America. *Hunterian.*

Group PALPICORNIA.

- F 24. The Great Water Beetle, *Hydrous piceus*, Linn. sp.
Fig. Curt. Brit. Ent. pl. 239.
Hab. British Islands. *Hunterian.*

Group BRACHELYTRA.

Family Staphylinidæ.

- F 25. The *Staphylinus maxillosus*, Linn. (*Creophilus*, Kirby.)
Fig. Fabr. S. El. ii. 592. Panz. F. I. G. 27. fig. 2.
Hab. Britain. *Hunterian.*
- F 26. The *Staphylinus cæsareus* (Cederh.).
Fig. Samouelle, Entomol. Comp. pl. 4. f. 10.
Hab. British Islands. *Hunterian.*
- F 27. The *Staphylinus murinus*, Linn. sp.
Fig. Oliv. pl. 6. fig. 51.
Hab. British Islands. *Hunterian.*
- F 28. The *Philonthus intermedius*, Boisd. et Lacord.
Hab. British Islands. *Hunterian.*
- F 28 A. The *Ocypus morio*, Grav.
Fig. Samouelle, Introd. p. 39.
Hab. Europe. *Hunterian.*

- F 29. The *Quedius molochinus*, Grav.
Fig. Curtis, British Entomology.
Hab. British Islands. *Hunterian.*
- F 30. The *Ocypus brunnipes*, Fabr.
Hab. British Islands. *Hunterian.*
- F 31. A species of *Ocypus* allied to *O. similis*.
Hab. British Islands. *Hunterian.*
- F 32. The *Pæderus riparius*, Linn. sp.
Fig. Don. v. pl. 167.
Hab. British Islands. *Hunterian.*

Family *Silphidæ*. Carrion Beetles.

- F 33. The *Necrophorus grandis*, Fabr. (*N. Americanus*, Oliv.)
Fig. Oliv. t. 1. fig. 3. Fabr. S. El. i. 334.
Hab. North America. *Hunterian.*
- F 34. The Burying Beetle, *Necrophorus vespillo*, Linn.
Fig. Oliv. pl. 1. fig. 1. Panz. F. I. G. 2. 21.
Hab. British Islands. *Hunterian.*
- F 35. The *Necrophila Americana*.
Fig. Emmons, Insects of New York, pl. 22. fig. 3.
Hab. North America. *Hunterian.*
- F 36. The *Oiceoptoma inæqualis*, Fabr.
Fig. Oliv. 2. 14. Fabr. S. El. i. 340.
Hab. North America. *Hunterian.*
- F 37. Two specimens of *Oiceoptoma rugosa*, Linn. sp.
Fig. Panz. F. I. G. 40. fig. 17.
Hab. British Islands. *Hunterian.*
- F 38. The *Silpha lævigata*, Fabr.
Fig. Oliv. pl. 1. fig. 1.
Hab. British Islands. *Hunterian.*

- F 39. The *Phosphuga atrata*, Linn. sp.

Fig. Herbst, Col. pl. 51. figs. 13, 14, 15.

Hab. British Islands.

Hunterian.

Family *Byrrhidæ*.

- F 40. The *Byrrhus pilula*, Linn.

Fig. Panz. F. I. G. 4. fig. 3.

Hab. British Islands.

Hunterian.

Family *Dermestidæ*. Bacon Beetles.

- F 41. The Leather-eater, *Dermestes vulpinus*, Linn.

Fig. Panz. F. I. G. 40. fig. 10.

Hab. British Islands.

Hunterian.

- F 42. The *Dermestes lardarius*, Linn.

Fig. Oliv. i. pl. 1. fig. 1.

Hab. British Islands.

Hunterian.

Family *Histeridæ*.

- F 43. The Mimic Beetle, *Hister unicolor*, Linn. sp.

Fig. Ent. Heft, pl. 1. fig. 1.

Hab. British Islands.

Hunterian.

- F 44. The *Hister cadaverinus*, Auct.

Fig. Ent. Heft, pl. 1. fig. 2.

Hab. British Islands.

Hunterian.

Family *Lycidæ*.

- F 45. The *Calopteron typicum* (*Digrapha*), Newman,

Fig. Ent. Mag. v. 380.

Hab. North America.

Hunterian.

Family *Telephoridæ*. "Soldiers and Sailors."

- F 46. The
- Telephorus rusticus*
- , Linn.

Fig. Oliv. pl. 1. fig. 1.*Hab.* British Islands.*Hunterian.*

- F 47. The
- Telephorus melanurus*
- , Fabr.

Fig. Oliv. pl. 3. fig. 21.*Hab.* British Islands.*Hunterian.*Family *Melyridæ*.

- F 48. The
- Malachius æneus*
- , Don.

Fig. Donovan, pl. 96. fig. 2.*Hab.* British Islands.*Hunterian.*

- F 49. The
- Malachius bipustulatus*
- , Don.

Fig. Donovan, pl. 528. fig. 2.*Hab.* British Islands.*Hunterian.*Family *Elateridæ*. The Skip-jack Family.

- F 50. Two specimens of the Fire-fly of the West Indies,
- Pyrophorus noctilucus*
- , Linn.

Fig. Oliv. t. 2. fig. 14. Fabr. S. El. ii. 223. Sloane, Jamaica, ii. t. 237. fig. 1. Linn. Syst. Nat. ii. 657.*Hab.* West Indies.*Hunterian.*

- F 51. The
- Chalcolepidius sulcatus*
- , Fabr.

Fig. Oliv. t. 2. fig. 10.*Hab.* South America.*Hunterian.*

- F 52. The
- Chalcolepidius sulcatus*
- , Fabr. sp.

Fig. Oliv. Ins. t. 2. fig. 10. (*Elater sulcatus*, Fabr. S. El. ii. 226.)*Hab.* South America.*Hunterian.*

- F 53. The
- Alaus oculatus*
- , Linn. sp.

Fig. Oliv. t. 3. fig. 34. (*Elater oculatus*, L. Syst. Nat. ii. 651.)*Hab.* North America.*Hunterian.*

- F 54. The *Alaus oculatus* (*Elater oculatus*, Linn.).
Fig. Oliv. t. 3. fig. 34.
Hab. North America. *Hunterian.*
- F 55. The *Alaus oculatus*, Linn. sp.
Fig. Eschsch. Dej. Cat. p. 101. Lap. Anim. Art. i. 236.
Hab. North America. *Hunterian.*
- F 56. The *Agrypnus murinus*, Linn. sp.
Fig. Herbst, pl. 161. fig. 8.
Hab. Europe. *Hunterian.*
- F 57. The *Agriotes segetis*, Bierk.
Fig. Bierk. Act. Holm. 1779, pl. 10. figs. 1-3.
Hab. British Islands. *Hunterian.*
- F 58. The *Agriotes sputator*, Fabr.
Fig. Herbst, pl. 164. fig. 11.
Hab. British Islands. *Hunterian.*
- F 59. The *Athous hæmorrhoidalis*, Fabr.
Fig. Herbst, pl. 163. fig. 11.
Hab. British Islands. *Hunterian.*
- Family *Buprestidæ*.
- F 60. Two specimens of *Sternocera sternicornis*, Linn. sp.
Fig. Lap. et Gory, Mon. Bupr. t. 1. fig. 3.
Hab. East Indies. *Hunterian.*
- F 61. The *Sternocera chrysis* (*Buprestis*, Oliv.).
Fig. Fabr. S. El. ii. p. 194.
Hab. East Indies. *Hunterian.*
- F 62. The *Sternocera chrysis*, Lap. et Gory (*Buprestis sternicornis*, Linn.).
Fig. Lap. et Gory, Mon. Bupr. t. 2. fig. 5.
Hab. East Indies. *Hunterian.*

- F 63. The *Sternocera interrupta*, Fabr. sp.
Fig. Fabr. S. El. i. 193. Oliv. t. 4. fig. 28.
Hab. West Africa. *Hunterian.*
- F 64. The *Sternocera interrupta*, Lap. et Gory.
Fig. Mon. Bupr. t. 3. fig. 12.
Hab. West Africa. *Hunterian.*
- F 65. The *Iulodis fascicularis*, Lap. et Gory.
Fig. Lap. et Gory, Mon. t. 2. fig. 6. *Buprestis fascicularis*, Linn.
Hab. South Africa. *Hunterian.*
- F 66. The *Iulodis lasios*, Lap. et Gory.
Fig. Lap. et Gory, Mon. t. 9. fig. 42. *Buprestis*, Herbst, t. 145. fig. 5.
Hab. South Africa. *Hunterian.*
- F 67. The *Chrysochroa ocellata*, Fabr. sp.
Fig. Lap. et Gory, Mon. t. 3. fig. 12. Oliv. t. 1. fig. 3.
Hab. East Indies. *Hunterian.*
- F 68. The *Chalcophora Virginiensis*, Lap. et Gory.
Fig. Lap. et Gory, Mon. t. 2. fig. 6. *Buprestis*, Herbst, ix. t. 148.
Hab. North America. *Hunterian.*
- F 69. The *Temognatha variabilis*, Donovan, sp.
Fig. Lap. et Gory, Mon. Buprest. t. 2. figs. 7, 8.
Hab. Australia. *Purchased.*
- F 70. The *Polycesta porcata*, Fabr. sp.
Fig. Lap. et Gory, Mon. t. 1. fig. 1. Herbst, ix. t. 145. fig. 6.
Hab. West Indies. *Hunterian.*
- F 71. A species of *Chrysobothris*. *Hunterian.*

Section LAMELLICORNIA.

Family Scarabæidæ.

- F 72. The Sacred Beetle, *Scarabæus sacer*, Linn.
Fig. Oliv. pl. 8. fig. 59.
Hab. South of Europe. *Hunterian.*
- F 73. The *Scarabæus Hottentottus*.
Hab. South Africa. *Hunterian.*
- F 74. The *Copris Carolina*, Fabr.
Fig. Emmons, Ins. of New York, pl. 12. fig. 8.
Hab. North America. *Hunterian.*
- F 75. The *Coprobis chalcites*, Auct.
Fig. Hald. Proc. Acad. Philad. i. 304.
Hab. North America. *Hunterian.*
- F 76. The *Phanæus carnifex*, Linn. sp.
Fig. Emmons, Ins. of New York, pl. 12. fig. 5. Drury, t. 35. figs. 3, 4.
Hab. North America. *Hunterian.*

Family Trogidæ.

- F 77. The *Trox Carolinus*, Dej.
Hab. North America. *Hunterian.*
- F 78. The *Trox sabulosus*, Linn. sp.
Fig. Panz. F. I. G. 7. fig. 1. Degeer, iv. pl. 10. fig. 12.
Hab. British Islands. *Hunterian.*

Family Dynastidæ.

- F 79. The *Heteronychus fossator*, Dej. sp.
Fig. Burm. Handb. der Ent. v. 101. *Scarabæus*, Dej. Cat. p. 168.
Hab. South America. *Hunterian.*

- F 80. The *Phileurus didymus*, Fabr.
Fig. Dej. Cat. p. 166. Burm. Handb. der Ent. v. 159.
Hab. South America. *Hunterian.*
- F 81. The *Oryctes rhinoceros* (*Geotrupes*), Fabr.
Fig. Burm. Handb. der Ent. v. p. 202. Oliv. t. 18. f. 166.
Hab. East Indies. Penang. *Presented by R. Taylor, Esq., M.R.C.S.*
- F 82. The *Oryctes boas*, Fabr. sp.
Fig. Burm. Handb. der Ent. v. p. 199. *Scarabæus*, Oliv. pl. 4. fig. 24.
Hab. South Africa. *Hunterian.*
- F 83. The *Strategus aloeus*, Fabr. sp.
Fig. Burm. Handb. der Ent. v. 131. Oliv. Ins. pl. 3. fig. 22.
Hab. Brazil. *Hunterian.*
- F 84. The *Strategus Titanus*, Fabr. sp.
Fig. Burm. Handb. der Ent. v. 136. *Scarabæus Ajax*, Oliv. Ins. pl. 2.
fig. 18.
Hab. West Indies. *Hunterian.*
- F 85. The *Strategus Antæus* (*Geotrupes*), Fabr.
Fig. Burm. Handb. der Ent. v. 129. *Scarabæus*, Oliv. Ins. pl. 13. fig. 12.
Hab. North America. *Hunterian.*
- F 86. The *Dynastes Hercules*, Linn. sp.
Fig. Oliv. pl. 1. fig. 1, ♂. Oliv. pl. 23. fig. 1, ♀.
Hab. Tropical South America. *Hunterian.*
- F 87. The *Dynastes Tityus* (*Geotrupes*), Fabr.
Fig. Burm. Handb. der Ent. v. p. 260. Oliv. pl. 4. fig. 31.
Hab. North America. *Hunterian.*
- F 88. The *Megasoma Typhon*, Fabr.
Fig. Oliv. pl. 16. fig. 152. Fabr. S. El. i. 12.
Hab. Brazil. *Presented.*

- F 89. The *Xylotrupes Gideon*, Burm.
Fig. *Scarabæus Gideon*, Oliv. pl. 11. fig. 102.
Hab. India. *Hunterian.*
- F 90. The *Augosoma Centaurus* (*Geotrupes*), Fabr.
Fig. Burm. Handb. der Ent. v. p. 263. Drury, Ins. i. pl. 36. fig. 1.
Hab. West Africa. *Hunterian.*
- F 91. The *Augosoma Ganymedes*, Fabr. sp.
Fig. Fabr. S. El. i. p. 5.
Hab. West Africa. *Hunterian.*
- F 92. The *Chalcosoma Atlas*, Burm. (*Scarabæus*, Linn.)
Fig. Oliv. pl. 28. fig. 242. Burm. Handb. v. p. 270.
Hab. East Indies. *Purchased.*
- Family *Melitophila*. Rose Beetles.
- F 93. Three specimens (male and female) of Drury's African Goliath Beetle,
Goliathus Drurii, Westw.
Fig. ♂, Drury, Ins. iii. t. 40. ♀, Klug, Erm. R. t. 15. fig. 7. (*Gol. regius*).
Hab. West Africa. *Presented by Dr. W. F. Daniel.*
- F 94. The *Goliathus Cacicus*, Oliv. sp.
Fig. ♂, Oliv. Col. t. 11. fig. 2. ♀, Hope, Man. Col. t. 1.
Hab. West Africa. *Purchased.*
- F 95. The *Dicronorrhina micans*, Drury, sp.
Fig. Drury, Ins. ii. t. 32. fig. 3.
Hab. West Africa. *Purchased.*
- F 96. The *Rhomborhina resplendens* (*Cetonia*), Schœnh.
Fig. Burm. Handb. iii. p. 198. *Goliathus Heros*, Gory et Perch. Mon.
t. 26. fig. 5.
Hab. North China. *Hunterian.*
- F 97. The *Agestrata Luconica*, Eschsch.
Fig. Zool. Atl. t. 4. fig. 8.
Hab. Philippine Islands. *Purchased.*

- F 98. The *Gymnetis lanius*, Linn. sp.
Fig. Gory et Perch. Mon. pl. 70. fig. 5. Drury, Ins. i. pl. 33. fig. 8.
Hab. Jamaica. Hunterian.
- F 99. The *Cotinis nitida*, Linn. sp.
Fig. Burm. Handb. der Ent. iii. p. 256. Drury, Ins. i. pl. 33. figs. 5, 6.
Hab. North America and West Indies. Hunterian.
- F 100. The *Trichostetha Capensis*, Linn. sp.
Fig. Burm. Handb. der Ent. iii. 402. Drury, Ins. i. pl. 33. fig. 3.
Hab. South Africa. Hunterian.
- F 101. The *Trichostetha fascicularis* (*Cetonia*), Fabr.
Fig. Burm. Handb. der Ent. iii. p. 399. Drury, Ill. i. pl. 33. fig. 2.
Hab. South Africa. Hunterian.
- F 102. The *Pachnoda marginata*, Fabr.
Fig. Drury, ii. pl. 32. fig. 1. Fabr. Syst. El. ii. 145.
Hab. West Africa. Purchased.
- F 103. The *Diplognatha gagates*, Gory.
Fig. Gory et Perch. Monogr. Cetoniadæ.
Hab. West Africa. Hunterian.
- F 104. The *Scaptobius Capensis*, Gory et Perch. sp.
Fig. Gory et Perch. Mon. t. 16. fig. 6.
Hab. South Africa. Hunterian.
- F 105. The *Gnorimus nobilis*, Linn. sp.
Fig. Oliv. t. 3. fig. 10.
Hab. British Islands. Hunterian.
- F 105 A. The *Trichius niger*, Fabr.
Fig. Oliv. t. 7. fig. 54.
Hab. North America. Hunterian.

- F 106. The *Trigonopeltastes delta*, Forster, sp.

Fig. Drury, Ins. ii. t. 30. figs. 1, 2.

Hab. United States.

Hunterian.

Family *Rutelidæ*.

- F 107. The *Macraspis lucida*, Oliv. sp.

Fig. Oliv. Col. pl. 7. fig. 64.

Hab. South America.

Hunterian.

- F 108. The *Macraspis chloraspis*, Laporte.

Fig. Laporte, An. Art. ii. p. 118.

Hab. Brazil.

Hunterian.

- F 109. The *Anoplognathus analis*, Schœnh. Syn. App. 61.

Fig. Leach, Zool. Misc. ii. pl. 75. fig. 2 (*A. viriditarsis*).

Hab. Australia.

Purchased.

- F 110. The *Anoplognathus porosus*, Schœnh.

Fig. Schœnh. Syn. p. 63. *A. inustus*, Kirby, Linn. Trans. xii. p. 405.

Hab. Australia.

Purchased.

Family *Melolonthidæ*.

- F 111. The Common Cockchafer, *Melolontha vulgaris* (*Scarabæus melolontha*, Linn.).

Fig. Panzer, Faun. Insect. Germ. fasc. 95. fig. 6.

Hab. British Islands.

Hunterian.

- F 112. The Autumn Chafer, *Amphimalla solstitialis*, Linn.

Fig. Oliv. pl. 2. figs. 8 & 11. *Melolontha*, Auct.

Hab. British Islands.

Hunterian.

- F 113. The *Mimela Chinensis*, Kirby, sp.

Fig. Kirby, Linn. Trans. xiv. pl. 3. fig. 4.

Hab. China.

Hunterian.

- F 114. The *Pelidnota punctata*, Linn. sp.
Fig. Emmons, New York, pl. 10. fig. 6. Drury, Ins. i. pl. 31. fig. 5.
Hab. North America. *Hunterian.*

Family *Lucanidæ*. Stag-Beetles.

- F 115. The Stag Beetle, *Lucanus cervus*, Linn. sp.
Fig. Burm. Handb. der Ent. v. p. 350. Curtis, Brit. Ent. ix. fol. 490.
Hab. Europe. *Hunterian.*
- F 116. The *Lucanus lunifer*, Hope.
Fig. Royle's Ill. of Himalaya, pl. 1. fig. 4.
Hab. East Indies. Himalaya. *Hunterian.*
- F 117. The *Lucanus elaphus*, Fabr.
Fig. Oliv. Ent. pl. 3. fig. 7. Burm. Handb. der Ent. v. p. 354.
Hab. North America. *Hunterian.*
- F 118. The *Lucanus capreolus*, Linn.
Fig. *L. dama*, Fabr. S. El. ii. p. 249. Oliv. t. 2. fig. 4.
Hab. North America. *Hunterian.*

Family *Passalidæ*.

- F 119. The *Passalus cornutus*, Fabr.
Fig. *P. interruptus*, Oliv. Ins. pl. 3. fig. 5. Fabr. S. El. ii. 256.
Hab. North America. *Hunterian.*
- F 120. The *Passalus punctiger*, Lep. et Serv.
Fig. Percheron, Mon. t. 3. fig. 6. Encyc. Méth. x. p. 20.
Hab. South America. *Hunterian.*

Section HETEROMERA.

Family *Melosomata*.

- F 121. The *Moluris striata*, Latr.
Fig. Latr. Dej. Cat. p. 200. *Pimelia*, Fabr. S. El. i. p. 128.
Hab. South Africa. *Hunterian*

- F 122. The *Moluris lævigata*, Oliv. sp.
Fig. *Tenebrio*, Oliv. t. 2. fig. 22. *Pimelia unicolor*, Fabr. S. El. i. 128.
Hab. South Africa. *Hunterian.*
- F 123. The *Pezodontus cupreus*, Fabr. sp.
Fig. Dej. Cat. p. 225. *Tenebrio*, Fabr. S. El. 144.
Hab. West Africa. *Hunterian.*
- F 124. The *Upis saperdoides*, Bosc, sp. (*Tenebrio lævis*, Oliv.)
Fig. Oliv. Ins. 3. 11. *Iphthinus*, Dej. Cat. p. 255.
Hab. North America. *Hunterian.*
- F 125. The *Upis femoratus*, Fabr. sp.
Fig. Pal. Beauv. t. 31. fig. 5. *Iphthinus*, Dej. Cat. p. 255.
Hab. West America. *Hunterian.*
- F 126. The *Opatrum sabulosum*, Linn.
Hab. British Islands. *Hunterian.*
- F 127. The *Platynotus striatus*.
Fig. Mulsant, Opuscules Entomologiques, iv. p. 41.
Hab. South Africa. *Hunterian.*
- Family *Vesicantia*. Blistering Beetles.
- F 128. The *Mylabris lunata*, Lap. sp.
Fig. Oliv. Ins. t. 1. fig. 2. Fabr. S. El. ii. p. 82.
Hab. South Africa. *Hunterian.*
- F 129. The *Mylabris oculata*, Thunb.
Fig. Thunb. Nov. Spec. Ins. vi. fig. 14. Oliv. Ins. t. 2. fig. 11.
Hab. South Africa. *Hunterian.*
- F 130. The *Mylabris sidæ*, var., Fabr. sp.
Fig. Fabr. S. El. ii. 83. Thunb. Ins. vi. t. E. fig. 14.
Hab. South Africa. *Hunterian.*

Section RHYNCHOPHORA.

Family *Orthoceri*.F 131. The *Rhynchites bicolor*.*Hab.* North America.*Hunterian.*Family *Curculionidæ*. The Weevils.F 132. The *Brachycerus apterus* (*Curculio*), Linn.*Fig.* Oliv. t. 1. fig. 3. Fabr. S. El. ii. p. 412.*Hab.* Africa.*Hunterian.*F 133. The Diamond Beetle, *Entimus imperialis* (Fabr. sp.).*Fig.* Drury, Ins. ii. t. 33. fig. 1.*Hab.* South America.*Hunterian, and presented.*F 134. The *Leptops quadridens*, Schoenh.*Fig.* *Curculio*, Fabr. S. El. ii. 536. Oliv. Ins. fig. 187.*Hab.* Australia.*Hunterian.*F 135. The *Sitonia lineata*, Linn.*Fig.* Curtis, Guide Brit. Ins. 375.*Hab.* Britain.*Hunterian.*F 136. The *Sitonia Regensteinensis*, Ger.*Fig.* Curtis, Guide Brit. Ins. 375.*Hab.* British Islands.*Hunterian.*F 137. The *Cherrus iodimerus*, Boisd.*Fig.* Quoy, Voy. de l'Astrolabe. Jekel, Curc. p. 54.*Hab.* Australia.*Hunterian.*F 138. The *Cneorhinus exaratus*, Marsh. sp.*Fig.* Curtis, Guide Brit. Ins. 374.*Hab.* British Islands.*Hunterian.*

- F 139. The *Liophlæus nubilis*, Herbst.
Fig. Curtis, Guide Brit. Ins. 371.
Hab. Europe. *Hunterian.*
- F 140. The *Cleonus sulcirostris*, Linn.
Fig. Curtis, Guide Brit. Ins. 379.
Hab. British Islands. *Hunterian.*
- F 141. The *Balaninus villosus*, Herbst.
Fig. Curtis, Guide Brit. Ins. 355.
Hab. British Islands. *Hunterian.*
- F 142. The *Anthonomus ulmi*, De Geer.
Fig. Curt. Brit. Ent. p. 562. De G. vol. v. pl. 6. fig. 26.
Hab. British Islands. *Hunterian.*
- F 143. The *Trigonotarsus calandroides*, Guér.
Fig. Jekel, Curc. p. 248.
Hab. Australia. *Hunterian.*
- F 144. The *Rhynchophorus palmarum* (*Calandra*), Fabr.
Fig. Fabr. S. El. ii. 430. Oliv. t. 2. fig. 16.
Hab. South America. *Hunterian.*

Group LONGICORNIA.

Family *Prionidæ*.

- F 145. The *Prionus imbricornis*, Oliv.
Fig. Col. iv. t. 13. fig. 52 (*Cerambyx*). L. Syst. Nat. ii. 622.
Hab. North America. *Hunterian.*
- F 146. The *Prionus laticollis* (*Cerambyx*), Drury.
Fig. Drury, Ill. i. t. 37. fig. 2.
Hab. North America. *Hunterian.*
- F 147. A species of *Macrotoma*. *Purchased.*

F 148. An unnamed species of *Derobrachus*. *Purchased.*

F 149. The *Prionomma orientalis*, White (*Prionus*, Oliv.).
Fig. White, Cat. p. 19. Oliv. Col. iv. t. 13. fig. 51.
Hab. Ceylon. *Hunterian.*

F 150. The *Mallodon spinibarbe*, Linn. sp.
Fig. White, Cat. p. 43. *Cerambyx*, Linn. Syst. Nat. ii. 624.
Hab. Brazil. *Hunterian.*

F 151. The *Mallodon maxillosum*, Serv. (*Prionus*, Fabr.)
Fig. Fabr. S. El. ii. 264. Oliv. Col. iv. t. 1. fig. 3.
Hab. South America. *Hunterian.*

F 152. The *Solenoptera lineata*, Serv.
Fig. Ann. Soc. Ent. Fr. i. 184. *Cerambyx*, Linn. *Prionus*, Fabr. S. El.
ii. 257. Oliv. Col. iv. t. 8. fig. 30, t. 11. fig. 30.
Hab. West Indies. *Hunterian.*

Family *Cerambycidae*.

F 153. The *Trachyderes succinctus*, Linn.
Fig. Dup. Mag. de Zool. 1836, pl. 154. fig. 2.
Hab. Brazil. *Hunterian.*

F 154. The *Chlorida festiva*, Linn. sp.
Fig. Serv. Ann. Soc. Ent. Fr. iii. p. 32. Drury, Ill. i. t. 37. fig. 5.
Hab. Brazil. *Hunterian.*

F 155. The *Eburia pedestris*, White.
Fig. Cat. of Longicornia in Brit. Mus. p. 88. no. 2.
Hab. Jamaica. *Hunterian.*

F 156. The *Phoracantha semipunctata*, Fabr. sp.
Fig. *Stenocorus*, Fabr. S. El. ii. 306. *Cerambyx*, Oliv. Col. iv. t. 2. fig. 19.
Hab. Australia. *Hunterian.*

- F 157. The *Elaphidion spinicorne*, Drury, sp.
Fig. *Cerambyx*, Drury, Ins. i. t. 41. fig. 4. Serv. Ann. Soc. Ent. Fr. iii. 66.
Hab. West Indies. *Hunterian.*
- F 158. The *Elaphidion putator*, Peck.
Fig. *Stenocorus*, Peck. Harris, Ins. Mass. p. 81.
Hab. United States. *Hunterian.*
- F 159. The *Callichroma virens*, Linn. sp.
Fig. Oliv. Col. iv. 29. Drury, Ill. i. t. 40. fig. 1.
Hab. West Indies. *Hunterian.*
- F 160. The *Callichroma assimilatum*, White.
Fig. White, Cat. Brit. Mus. p. 158. no. 20.
Hab. Brazil. *Hunterian.*
- F 161. The *Callichroma melancholicum*, Chevr.
Fig. White, Cat. Brit. Mus. p. 164.
Hab. Mexico. *Hunterian.*
- F 162. The Musk Beetle, *Cerambyx moschatus*, Linn. sp.
Hab. British Islands. *Hunterian.*
- F 163. The *Clytus terminans*, Fabr.
Fig. Lap. et Gory, Mon. 83. pl. 15. fig. 96. Fabr. S. El. ii. p. 345.
Hab. North America. *Hunterian.*
- F 164. The *Chion rusticum*, Fabr. sp. (var. *garganicum*.)
Fig. Newman, Entomologist, p. 23. Fabr. S. El. ii. 311. *Cerambyx*
cinctus, Drury, Ill. i. pl. 37. fig. 6.
Hab. United States. *Hunterian.*

Family *Lamiidæ*.

- F 165. The Harlequin Beetle, *Acrocinus longimanus*, Linn. sp.
Fig. Oliv. t. 3. fig. 12, t. 4. fig. 12.
Hab. South America. *Purchased.*

- F 166. The *Lagocheirus araneiformis*, Linn.
Fig. White, Cat. Brit. Mus. p. 365. Drury, Ill. ii. t. 35. fig. 4.
Hab. South America. *Hunterian.*
- F 167. The *Ceroplesis æthiops*, Fabr. sp.
Fig. *Lamia*, Fabr. S. El. ii. 297. *Cerambyx*, Oliv. t. 1. fig. 2.
Hab. South Africa. *Hunterian.*
- F 168. The *Sternotomis regalis*, Fabr. sp.
Fig. *Lamia*, Fabr. S. El. ii. 236. *Cerambyx*, Oliv. Col. t. 4. f. 24.
Hab. West Africa. *Hunterian.*
- F 169. A species of *Sternotomis*.
Hab. West Africa. *Hunterian.*
- F 170. The *Batocera rubus*, Linn. sp.
Fig. Oliv. t. 8. fig. 57. Serv. Ann. Soc. Ent. Fr. iv. 94.
Hab. East Indies. *Hunterian.*
- F 171. The *Phryneta verrucosa*, Drury, sp.
Fig. *Cerambyx*, Drury, Ins. *Lamia sternutator*, Fabr. Syst. El. ii. 293.
Hab. West Indies. *Hunterian.*
- F 172. The *Prosopocera bipunctata*, Drury, sp.
Fig. *Cerambyx*, Drury, Ins. ii. t. 31. fig. 2.
Hab. West Africa. *Hunterian.*
- F 173. The *Tetraopes tetraophthalmus*, Forster, sp.
Fig. *Cerambyx*, Forster, Nov. Spec. Ins. p. 41. *Lamia tornator*, Fabr. S.
El. ii. 301.
Hab. North America. *Hunterian.*
- F 174. The *Oberea assimilis*, Chevr.
Hab. United States. *Hunterian.*

F 175. The *Desmocerus palliatus*, Leconte.

Fig. Leconte, Journ. Acad. Nat. Sc. Philad. n. s. i. p. 318.

Hab. North America.

Hunterian.

F 176. The *Distema undata*, Dej.

Fig. Dej. Cat. p. 380. Leconte, Journ. Acad. Nat. Sc. Philad. n. s. i. p. 37.

Hab. North America.

Hunterian.

Family *Lepturidæ*.

F 177. An unnamed species of *Pachyta*, allied to *P. collaris*.

Hab. Unrecorded.

Hunterian.

Group PHYTOPHAGA.

Family *Sagridæ*.

F 178. The Beetle of the Asparagus, *Crioceris asparagi*, Linn.

Fig. Donovan, Brit. Ins. i. pl. 28.

Hab. British Islands.

Hunterian.

Family *Cassididæ*. Tortoise Beetles.

F 179. The *Chelymormpha cribraria*, Fabr.

Fig. Bohem. Mon. Cassid. ii. p. 55. *Cassida*, Fabr. S. El. i. p. 396.

Hab. South America.

Hunterian.

F 180. The *Platycycla deruta*, Bohem.

Fig. Bohem. Mon. Cassid. ii. p. 241. White, Cat. Brit. Mus. p. 104.

Hab. North America.

Hunterian.

ORTHOPTERA.

Sect. CURSORIA.

Family *Blattidæ*.

F 181. The Gigantic Cockroach, *Blatta gigantea*, Linn. sp.

Fig. Drury, Ins. ii. t. 36. fig. 2.

Hab. Brazil.

Purchased.

Section RAPTORIA.

Family *Mantidæ*. Praying Insects.

- F 182. The
- Empusa gongylodes*
- , Linn. sp.

Fig. Drury, Ins. i. t. 50. fig. 2.*Hab.* India, Ceylon, &c.*Purchased.*

Section AMBULATORIA.

Family *Phasmidæ*. Walking-Sticks.

- F 183. The Goliath Walking-Stick,
- Cyphocrania Goliath*
- , G. R. Gray.

Fig. Audouin et Brullé, Hist. Nat. Ins. t. ix. pl. 7.*Hab.* N. parts of Australia ; New Guinea.*Presented by Capt. Sir E. Home, Bart., R.N.*

- F 184. The
- Lopaphus coccophagus*
- , G. R. Gray, sp. Westwood, Cat. Phasm. Brit. Mus. p. 99.

Fig. Newport, Phil. Trans. 1844, pl. 14. fig. 4.*Hab.* Navigators' Islands, and other islands in the Pacific.*Presented by Capt. Sir E. Home, Bart., R.N.*

- F 185. The Walking Leaf,
- Phyllium siccifolium*
- , Linn. sp. Westwood, Cat. Phasm. Brit. Mus. p. 172.

Fig. Roesel, Ins. ii. pl. 17. figs. 4, 5.*Hab.* East Indies.*Purchased.*

Section SALTATORIA.

Family *Achetidæ*.

- F 186. The Common Mole Cricket,
- Gryllotalpa vulgaris*
- , Latr.

Fig. Roesel, Ins. ii. tab. 14, 15. Fischer, Orthopt. Eur. t. 9. fig. 1.*Hab.* British Islands.*Purchased.*Family *Gryllidæ*.

- F 187. The
- Deinacrida heteracantha*
- , White.

Fig. Voyage of Erebus and Terror.*Hab.* New Zealand.*Presented by Capt. Sir E. Home, Bart., R.N.*

F 188. The *Acanthodis imperialis*, White.

Fig. Westwood, Cab. Orient. Ent.

Hab. North India.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Locustidæ*.

F 189. The *Teratodes monticollis*, G. R. Gray.

Fig. Griff. Animal Kingdom.

Hab. East Indies.

Purchased.

F 190. The *Petasida ephippigera*, White.

Fig. Eyre's Australia and Leuckhardt's Australia.

Hab. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

F 191. The *Phymateus leprosus*, Fabr. sp.

Fig. Stoll, Locustidæ.

Hab. South Africa.

Purchased.

Order NEUROPTERA.

Family *Hemerobiidæ*.

F 192. The *Corydalis cornuta*, Linn. sp.

Fig. Degeer, Ins. iii. pl. 27. fig. 1.

Hab. North and South America.

Purchased.

Family *Myrmeleonidæ*. Ant Lions.

F 193. The *Myrmeleon striola*, Leach.

Fig. Walker, Cat. Neur. p. 340.

Hab. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Libellulidæ*. Dragon Flies.

F 194. The *Libellula Carolina*, Linn.

Fig. Drury, vol. i. pl. 48. fig. 1.

Hab. North America.

Purchased.

- F 195. The *Libellula Servilia*, Drury (*L. ferruginea*, Fabr.).
Fig. Drury, vol. i. pl. 47. fig. 6.
Hab. China. Purchased.
- F 196. The *Libellula equestris*, Fabr.
Fig. Drury, vol. ii. pl. 46. fig. 3 (*Lib. Tullia*).
Hab. India. China. Purchased.
- F 197. The Depressed Dragon Fly, *Libellula depressa*, Linn. sp.
Fig. Harris, pl. 26. figs. *l*, *m*.
Hab. Britain. Presented by F. T. Buckland, Esq., M.A.
- F 198. The *Palpopleura sexmaculata*, Fabr.
Fig. *Libellula*, Fabr. Ent. Syst. ii. p. 381.
Hab. China. Presented.
- F 199. A species of *Polyneura*.
Hab. N. China. Presented.
- F 200. The *Æshna cyanea* (Müller).
Fig. Harris (*Libellula anguis*), Ex. pl. 23. fig. 4.
Hab. British Islands. Purchased.
- F 201. The *Petalura gigantea*, Leach.
Fig. Leach, Zool. Misc. ii. pl. 95.
Hab. Australia. Presented by Capt. Sir E. Home, Bart., R.N.
- F 202. The *Hæterina septentrionalis*, Selys Longchamps.
Hab. South America. Presented.
- F 203. The *Mecistogaster longissimus*, Rœmer, sp.
Hab. South America. Presented.
- F 204. The *Mecistogaster ancilla*, Newman, Zoologist, 1850.
Hab. Brazil. Presented.

Order HYMENOPTERA.

Family *Tenthredinidæ*. Saw-Flies.

- F 205. The *Hylotoma femoralis*, Klug.
Fig. St. Farg. Faun. Fr. pl. 2. fig. 1.
Hab. British Islands. *Hunterian.*
- F 206. The *Allantus neglectus*, Klug.
Fig. Schæffer, Ic. vii. fig. 5 (*Tenthredo blanda*).
Hab. British Islands. *Hunterian.*
- F 207. The *Tenthredo nassata*, Linn.
Fig. Panzer, F. I. Germ. 65. fig. 2.
Hab. British Islands. *Hunterian.*
- F 208. The *Tenthredo scalaris*, Klug.
Fig. Panzer, Germ. F. I. 64. fig. 2. Donovan. xiii. pl. 444.
Hab. British Islands. *Hunterian.*

Family *Ichneumonidæ*.

- F 209. The *Ephialtes carbonarius*, Christius.
Fig. Christius, Ichneumonidæ.
Hab. Britain. *Hunterian.*
- F 210. The *Ichneumon sarcitorius*, Linn.
Fig. Christius Ichneumonidæ, pl. 35. fig. 7.
Hab. British Islands. *Hunterian.*
- F 211. The *Pimpla turionella*, Linn.
Hab. British Islands. *Hunterian.*

Family *Chrysididæ*.

- F 212. The Golden Wasp, *Chrysis ignita*, Linn.
Fig. Harris, Ex. pl. 19. Donovan. Brit. Ins. i. pl. 7.
Hab. Britain. *Hunterian.*

Family *Pompilidæ*.

- F 213. The *Pompilus fuscus*, Linn.
Fig. Panz. F. I. Germ. 65. fig. 15.
Hab. British Islands. *Hunterian.*
- F 214. The *Pompilus exaltatus*, Fabr.
Fig. Panz. F. I. Germ. 86. fig. 10.
Hab. British Islands. *Hunterian.*
- F 215. The *Pepsis basileus*, Smith.
Fig. Smith, Cat. Hym. Brit. Mus.
Hab. South America. *Hunterian.*
- F 216. A series of specimens of varieties of the Humble Bee, upon which Mr Hunter has made numerous observations; these are preserved in his own handwriting, and accompany the specimens. *Hunterian.*

HAUSTELLATA.

Order LEPIDOPTERA.

Section RHOPALOCERA. Butterflies.

Family *Papilionidæ*.

- F 217. The *Papilio Memnon*, Linn.
Fig. Cramer, t. 91. fig. C. Linn. Syst. Nat. ii. p. 747.
Hab. East Indies. China. *Hunterian.*
- F 218. The *Papilio Memnon*, Linn., var. *g*.
Fig. Cramer, t. 50. figs. A, B?
Hab. East Indies. *Hunterian.*
- F 219. The *Papilio Protenor*, Cramer.
Fig. Cramer, t. 49. figs. A, B. *Pap. Laomedon*, Fabr. Ent. Syst. iii.
fig. 13 ♀.
Hab. Northern India. *Hunterian.*

F 220. The *Papilio Paris*, Linn.*Fig.* Drury, Ex. Ins. t. 12. fig. 1. Linn. Syst. Nat. ii. 745.*Hab.* N. India.*Hunterian.*F 221. The *Papilio Helenus*, Linn.*Fig.* Cramer, t. 153. figs. A, B. Clerck, Icon. Ins. t. 13. fig. 2.*Hab.* India.*Hunterian.*F 222. The *Papilio Agamemnon*, Linn. Syst. Nat. ii. 748.*Fig.* Cramer, t. 106. figs. C, D (*Pap. Ægistus*).*Hab.* India.*Hunterian.*F 223. The *Papilio Sarpedon*, Linn. Syst. Nat. ii. 747.*Fig.* Cram. t. 122. figs. D, E.*Hab.* India, China, &c.*Hunterian.*F 224. The *Papilio Pammon*, Linn. Syst. Nat. ii. 746.*Fig.* Clerck, t. 14. fig. 2. Cramer, t. 141. fig. B.*Hab.* India.*Hunterian.*F 225. The *Papilio Polytes*, Linn. Syst. Nat. ii. 746.*Fig.* Clerck, t. 14. fig. 1. Cramer, t. 265. figs. A-C.*Hab.* India.*Hunterian.*F 226. The *Papilio Xuthus*, Linn. Syst. Nat. ii. 751.*Fig.* Drury, ii. t. 9. figs. 1, 2. Cramer, t. 73. figs. A, B.*Hab.* China.*Hunterian.*F 227. The Swallow-tailed Butterfly, *Papilio Machaon*, Linn.*Fig.* Lewin, Brit. Butt. t. 34. Hübner, Eur. Schm. 390.*Hab.* England, Europe, N. India.*Hunterian.*F 228. The Wood White Butterfly, *Leucophasia sinapis*, Steph.*Fig.* Hübner, Eur. Schm. 410, 411. *Papilio*, Linn. Syst. Nat. ii. 760.*Hab.* British Islands.*Hunterian.*

- F 229. The Green Checkered White Butterfly, *Pieris Daphidice*, Linn. sp.
Fig. Hübn. Eur. Schmett. t. 6. fig. 114.
Hab. British Islands. *Hunterian.*
- F 230. The *Pieris Thisbe*, Boisd. Spec. i. 449.
Fig. Cramer, t. 223. fig. C (*Papilio Thisbe*).
Hab. North India. *Hunterian.*
- F 231. The *Pieris Pasithoe*, Linn. Syst. Nat. ii. 755.
Fig. Cramer, t. 43. figs. D, E (*P. Porsenna*). Drury, ii. t. 8. figs. 3, 4
(*P. Dione*).
Hab. China and Java. *Hunterian.*
- F 232. The Green Veined White Butterfly, *Pieris napi*, Linn.
Fig. Lewin, t. 27. figs. 1-5. Hübner, Eur. Schmett. 406.
Hab. British Islands. *Hunterian.*
- F 233. The White Cabbage Butterfly, *Pieris brassicæ*, Linn.
Fig. Lewin, t. 25. figs. 1-5. Hübner, Eur. Schmett. 401.
Hab. British Islands and North India. *Hunterian.*
- F 234. The *Pieris Gliciria*, Cramer.
Fig. Cramer, tab. 171. figs. E, F.
Hab. India, China. *Hunterian.*

Family *Coliadæ*.

- F 235. The Brimstone Butterfly, *Gonepteryx rhamni*, Linn. Syst. Nat. ii. 765
(*Papilio*).
Fig. Curtis, British Ent. iv. t. 173.
Hab. British Islands. *Hunterian.*
- F 236. The *Callidryas Pyranthe*, Linn.
Fig. Drury, i. t. 12. figs. 3, 4 (*Pap. Chryseis*).
Hab. China and India. *Hunterian.*

- F 237. The Clouded Yellow Butterfly, *Colias Edusa*, Fabr.

Fig. Hübner, Eur. Schm. fig. 429. Lewin, t. 32.

Hab. British Islands.

Hunterian.

- F 238. The *Terias Hecabe*, Linn. sp.

Fig. Swainson, Zool. Illustr. t. 22.

Hab. India, Java, &c.

Hunterian.

Family *Danaidæ*.

- F 239. The *Euplæa superba*, Herbst, Ins.

Fig. Herbst, l. c. t. 119, 120. *Danaïs alopia*, Godart, Enc. M. ix. p. 177.

Hab. China.

Hunterian.

- F 240. The *Euplæa Midamus*, Linn.

Fig. Cramer, t. 127. figs. C, D (*Pap. Mulciber*).

Hab. India.

Hunterian.

- F 241. The *Danaïs similis*, Linn.

Fig. Clerck, t. 16. fig. 3. Cramer, t. 59. fig. F (*Pap. Aventina*).

Hab. China.

Hunterian.

- F 242. The *Danaïs Limniace*, Godart.

Fig. Cramer, t. 59. figs. C, D (*Pap. Limniace*).

Hab. India. Australia.

Hunterian.

- F 243. The *Danaïs Plexippus*, Linn.

Fig. Cramer, t. 206. figs. C, D (*Pap. Genutia*).

Hab. North India. China.

Hunterian.

Family *Heliconidæ*.

- F 244. The *Heliconia Erato*, Linn.

Fig. Clerck, t. 40. fig. 1.

Hab. South America.

Hunterian.

F 245. The *Acræa vesta*, Fabr.

Fig. Cramer, t. 228. figs. A, C.

Hab. East Indies and China.

Hunterian.

Family *Nymphalidæ*.

F 246. The *Argynnis Phalanta*, Fabr.

Fig. Drury, i. t. 21. figs. 1, 2. Cramer, t. 238. figs. A, B (*Pap. Columbina*).

Hab. India.

Hunterian.

F 247. The *Argynnis Niphe* ♀, Linn.

Fig. Cramer, t. 14. figs. B, E. Drury, i. t. 6. fig. 1.

Hab. China.

Hunterian.

F 248. The Silver-washed Fritillary, *Argynnis Paphia*, Linn.

Fig. Hübner, Eur. Schm. 69, 70. Lewin, t. 9. figs. 1-4.

Hab. British Islands.

Hunterian.

F 249. The High Brown Fritillary, *Argynnis Adippe*, Fabr.

Fig. Hübner, Eur. Schm. figs. 63, 64. Lewin, t. 10. figs. 1-4.

Hab. Europe.

Hunterian.

F 250. The Dark-green Fritillary, *Argynnis Aglaia*, Linn.

Fig. Hübner, Eur. Schm. figs. 65, 66. Lewin, t. 11.

Hab. British Islands.

Hunterian.

F 251. The Small Pearl-bordered Fritillary, *Argynnis Selene*, Fabr.

Fig. Lewin, t. 13.

Hab. British Islands.

Hunterian.

F 252. The *Melitæa Cinxia*, Linn. sp.

Fig. Esper, t. 47.

Hab. British Islands.

Hunterian.

F 253. The Greasy Fritillary, *Melitæa Artemis*, Fabr.

Fig. Hübner, Eur. Schm. figs. 4-6. Esper, t. 16. fig. 2 (*Pap. Maturna*).

Hab. Europe.

Hunterian.

- F 254. The *Melitæa didyma*, Fabr.
Fig. Esper, t. 61. fig. 1.
Hab. Europe. *Hunterian.*
- F 255. The *Vanessa Asterie*, Linn. Syst. Nat. ii. p. 769.
Fig. Cramer, t. 58. figs. F, D.
Hab. India and Java. *Hunterian.*
- F 256. The *Vanessa Almana*, Linn.
Fig. Cramer, t. 58. figs. F, G.
Hab. China. *Hunterian.*
- F 257. The *Vanessa Genoveva*, Cramer.
Fig. Cramer, t. 290. figs. E, F.
Hab. West Indies. *Hunterian.*
- F 258. The *Vanessa Orithyia*, Linn.
Fig. Linn. Syst. Nat. ii. p. 770 (*Papilio*).
Hab. India and China. *Hunterian.*
- F 259. The *Vanessa Ænone*, Linn. Syst. Nat. ii. p. 770 (*Papilio*).
Fig. Cramer, t. 35. figs. A, C.
Hab. India and Africa. *Hunterian.*
- F 260. The Red Admiral Butterfly, *Vanessa Atalanta*, Linn.
Fig. Lewin, t. 7. Hübner, Eur. Schm. figs. 75, 76.
Hab. Europe. *Hunterian.*
- F 261. The Peacock Butterfly, *Vanessa Io*, Linn.
Fig. Lewin, t. 4. Hübner, Eur. Schm. figs. 77, 78.
Hab. British Islands. *Hunterian.*
- F 262. The *Vanessa Charonia*, Fabr.
Fig. Drury, i. t. 15. figs. 1, 2.
Hab. India and China. *Hunterian.*

- F 263. The Large Tortoise-shell Butterfly, *Vanessa Polychloros*, Linn.
Fig. Lewin, t. 2. Hübner, Eur. Schm. figs. 81, 82.
Hab. British Islands. *Hunterian.*
- F 264. The *Vanessa C-album*, Linn.
Fig. Lewin, t. 5. Hübner, Eur. Schm. figs. 92, 93.
Hab. British Islands. *Hunterian.*
- F 265. The *Vanessa Lemonias*, Linn.
Fig. Cramer, t. 35. figs. D, F (*Pap. Aonis*).
Hab. North India. *Hunterian.*
- F 266. The Painted Lady Butterfly, *Cynthia cardui*, Linn. Syst. Nat. ii. 774.
Fig. Cramer, t. 26. figs. E, F. Lewin, t. 6.
Hab. Over the whole world. *Hunterian.*
- F 267. The *Pyrrhogyra Tipha*, Linn. sp.
Fig. Clerck, tab. 32. fig. 3.
Hab. Brazil. West Indies. *Hunterian.*
- F 268. The *Epiphile Liberia*, Fabr. Ent. Syst. iii. 135.
Fig. Cramer, t. 180. figs. E, F.
Hab. Brazil. *Hunterian.*
- F 269. The *Gynæcia Dirce*, Linn. sp.
Fig. Doubleday and Hewits, tab. 29. fig. 1.
Hab. Brazil and West Indies. *Hunterian.*
- F 270. The *Neptis Hordonia*, Godart, Encycl. Méth. ix. 429.
Fig. Stoll, t. 33. fig. 4.
Hab. Eastern Islands. *Hunterian.*
- F 271. The *Neptis aceris*, var., Fabr. Ent. Syst. iii. 245.
Fig. Cramer, t. 296. figs. E, F (*Pap. Leucothoe*).
Hab. India. *Hunterian.*

- F 272. The *Limenitis Procris*, Fabr. Ent. Syst. iii. 138.

Fig. Cramer, t. 106. figs. E, F.

Hab. Eastern Islands.

Hunterian.

- F 273. The *Limenitis Sibilla*, Linn. sp.

Fig. Curtis, Brit. Ent. pl. 124.

Hab. British Islands.

Hunterian.

- F 274. The Purple Emperor Butterfly, *Apatura Iris*, Linn.

Fig. Lewin, t. 16. figs. 1, 2. Hübner, Eur. Schm. figs. 117, 118.

Hab. British Islands.

Hunterian.

Family *Morphidæ*.

- F 275. The *Morpho Anaxibia*, Godart, Encycl. Méth. ix. p. 441.

Fig. Esper, Ausl. Schm. t. 55. fig. 1.

Hab. Brazil.

Hunterian.

- F 276. The *Morpho Helenor*, Godart, Encycl. Méth. ix. p. 443.

Fig. Cramer, t. 86. figs. A, B, t. 373. fig. C.

Hab. South America.

Hunterian.

Family *Brassolidæ*.

- F 277. The *Pavonia Teucer*, Linn. Syst. Nat. ii. p. 753.

Fig. Cramer, t. 51. figs. A, B.

Hab. South America

Hunterian.

Family *Satyridæ*.

- F 278. The Ringlet Butterfly, *Hipparchia Hyperanthus*, Linn. Syst. Nat. ii. p. 768.

Fig. Hübner, Europ. Schm. figs. 172, 173.

Hab. Europe. British Islands.

Hunterian.

- F 279. The Meadow Brown Butterfly, *Hipparchia Janira*, Linn. Syst. Nat. ii. p. 774.

Fig. Lewin, t. 18. figs. 1-5.

Hab. British Islands.

Hunterian.

- F 280. The Gate-keeper Butterfly, *Hipparchia Tithonus*, Linn. sp.

Fig. Lewin, Brit. Butterflies, tab. 22. figs. 1-5.

Hab. British Islands.

Hunterian.

- F 281. The Wall Butterfly, *Hipparchia Megæra*, Linn.

Fig. Lewin, t. 21. Hübner, Eur. Schm. figs. 177, 178.

Hab. British Islands.

Hunterian.

Family *Lycænidæ*.

- F 282. The Common Blue Butterfly, *Polyommatus Alexis*, Hübner.

Fig. Lewin, Brit. Butterflies, tab. 38. figs. 4, 5.

Hab. British Islands.

Hunterian.

- F 283. The *Chrysophanus Xanthe*, Fabr. sp.

Fig. Godart, Lepid. Fr. pl. 9. fig. 3.

Hab. Europe.

Hunterian.

Family *Thecladæ*.

- F 284. The Purple Hair Streak Butterfly, *Thecla quercus*, Linn.

Fig. Lewin, t. 43. Hübner, Eur. Schm. t. 318.

Hab. Europe. British Islands.

Hunterian

- F 285. The Brown Hair Streak Butterfly, *Thecla betulæ*, Linn. sp.

Fig. Lewin, Brit. Butterflies, pl. 42.

Hab. British Islands.

Hunterian.

Family *Erycinidæ*.

- F 286. The Duke of Burgundy Butterfly, *Nemeobius Lucina*, Linn. sp.

Fig. Curtis, Brit. Ent. pl. 316.

Hab. British Islands.

Hunterian.

- F 287. The *Stalachtis Euterpe*, Linn. sp.

Fig. Cramer, tab. 246. fig. D.

Hab. Brazil.

Hunterian.

Family *Hesperiidæ*.

- F 288. The Small Skipper Butterfly, *Pamphila Linea*, Fabr.

Fig. Lewin, Brit. Butterflies, tab. 45. figs. 5-7.

Hab. British Islands.

Hunterian.

Section HETEROCERA.

Family *Sphingidæ*. Hawk Moths.

- F 289. The Humming-bird Hawk Moth, *Macroglossa stellatarum*, Linn.

Fig. Curtis, Brit. Ent. tab. 747.

Hab. British Islands.

Hunterian.

- F 290. The Eyed Hawk Moth, *Smerinthus ocellatus*, Linn.

Fig. Westwood and Humphreys, i. tab. 1. figs. 1-3.

Hab. British Islands.

Hunterian.

- F 291. The Privet Hawk Moth, *Sphinx ligustri*, Linn.

Fig. Westwood and Humphreys, i. tab. 3. figs. 4-6.

Hab. British Islands.

Hunterian.

- F 292. The Elephant Hawk Moth, *Chærocampa Elpenor*, Linn.

Fig. Westwood and Humphreys, i. tab. 1. figs. 7, 8.

Hab. Britain.

Hunterian.

Family *Glaucopidæ*.

- F 293. The *Syntomis Phegea*, Linn. sp.

Fig. Drury, vol. i. tab. 25. fig. 2.

Hab. Europe.

Hunterian.

Family *Notodontidæ*.

- F 294. The Buff-tip Moth, *Pygæra bucephala*, Linn.

Fig. Curtis, Brit. Ent. xii. tab. 530.

Hab. British Islands.

Hunterian.

- F 295. The Swallow Prominent Moth, *Phæosia Dictæa*, Linn. sp.
Fig. Westw. and Humphr. tab. 13. figs. 16, 17.
Hab. British Islands. *Hunterian.*
- Family *Bombycidæ*.
- F 296. The *Attacus Atlas*, Linn. (*Phalæna*).
Fig. Cramer, iv. pl. 381. C.
Hab. India and China. *Hunterian.*
- F 297. The *Hyperchiria Liberia*, Fabr. sp.
Fig. Cramer, pl. 268. figs. F, C.
Hab. Brazil. *Hunterian.*
- F 298. The Oak Eggar Moth, *Lasiocampa quercus* ♂ ♀, Linn.
Fig. Esper, iii. t. 14. figs. 1, 2. Westw. and Humph. t. 11.
Hab. British Islands. *Hunterian.*
- F 299. The Oak Lappet Moth, *Gastropacha quercifolia*, Linn.
Fig. Westw. and Humphr. t. 12. figs. 4–7.
Hab. British Islands. *Hunterian.*
- F 300. The Tiger Moth, *Arctia caja*, Linn.
Fig. Westw. and Humphr. t. 19. figs. 5–8.
Hab. British Islands. *Hunterian.*
- F 301. The Brown-tail Moth, *Euproctis chrysorrhæa*, Linn. sp.
Fig. Westw. and Humphr. i. t. 18. figs. 9–11.
Hab. British Islands. *Hunterian.*
- F 302. The *Spilosoma lubricipeda*, Linn. sp.
Fig. Westw. and Humphr. tab. 18. figs. 17–19.
Hab. British Islands. *Hunterian.*
- F 303. The Wood Tiger Moth, *Parasemia plantaginis*, Linn.
Fig. Westw. and Humphr. i. t. 19. figs. 14, 15.
Hab. British Islands. *Hunterian.*
- F 304. The *Callimorpha Jacobææ*, Linn.
Fig. Curtis, Brit. Ent. xi. t. 499.
Hab. British Islands. *Hunterian.*

- F 305. The Lesser Broad-border Moth, *Triphæna janthina*, Steph. Haust. vol. ii. p. 106.
Fig. Westw. and Humphr. vol. i. tab. 21. fig. 9.
Hab. British Islands. *Hunterian.*
- F 306. The Large Yellow Underwing Moth, *Triphæna pronuba*, Linn. Syst. Nat. vol. ii. p. 512 (*Phalæna*).
Fig. Westw. and Humphr. vol. i. tab. 21. figs. 1-3.
Hab. British Islands. *Hunterian.*
- F 307. The Lesser Yellow Underwing Moth, *Triphæna orbona*, Fabr. Ent. Syst. vol. ii. p. 150 (*Noctua orbona*).
Fig. Westw. and Humphr. tab. 21. fig. 1.
Hab. British Islands. *Hunterian.*
- F 308. The Square Spot Rustic Moth, *Segetia xanthographa*, Schiff. sp.
Fig. Westw. and Humphr. vol. i. tab. 29. fig. 9.
Hab. British Islands. *Hunterian.*
- F 309. The Dark Arches Moth, *Xylophasia polyodon*, Linn. Syst. Nat. vol. ii. (*Phalæna polyodon*).
Fig. Westw. and Humphr. vol. i. tab. 32. fig. 3.
Hab. British Islands. *Hunterian.*
- F 310. The Dotted Clay Moth, *Graphiphora Baja*, Schiff.
Fig. Westw. and Humphr. vol. i. tab. 25. figs. 8, 9.
Hab. British Islands. *Hunterian.*
- F 311. The Beautiful Brocade Moth, *Hadena contigua*, Schiff.
Fig. Westw. and Humphr. tab. 33. figs. 5, 6.
Hab. Britain. *Presented.*
- F 312. The *Mamestra brassicæ*, Linn. Syst. Nat. vol. ii. p. 516 (*Phalæna brassicæ*).
Fig. Westw. and Humphr. vol. i. tab. 36. figs. 8, 9.
Hab. British Islands. *Hunterian.*

- F 313. The Broom Moth, *Mamestra pisi*, Linn. sp.
Fig. Westw. and Humphr. tab. 36. figs. 2, 3.
Hab. British Islands. *Hunterian.*
- F 314. The Marvel-du-jour Moth, *Agriopis aprilina*, Linn. Syst. Nat. vol. ii. p. 514
(*Phalæna aprilina*).
Fig. Westw. and Humphr. vol. i. tab. 39. figs. 13, 14.
Hab. British Islands. *Hunterian.*
- F 315. The Old Lady Moth, *Mormo maura*, Linn. Syst. Nat. vol. ii. p. 512.
Fig. Westw. and Humphr. tab. 55. figs. 1, 2.
Hab. British Islands. *Hunterian.*
- F 316. The Gothic Moth, *Nænia typica*, Linn. sp.
Fig. Westw. and Humphr. tab. 30. figs. 17, 18.
Hab. Britain. *Hunterian.*
- F 317. The Grey Shoulder-knot Moth, *Xylina rhizolitha*, Schiff. sp.
Fig. Westw. and Humphr. vol. i. tab. 31. fig. 6.
Hab. British Islands. *Hunterian.*
- F 318. The Golden Ear Moth, *Apamea nictitans*, Linn. sp.
Fig. Westw. and Humphr. tab. 37. figs. 3, 4.
Hab. British Islands. *Hunterian.*
- F 319. The Brick Moth, *Orbona ferruginea*, Schiff.
Fig. Westw. and Humphr. vol. i. tab. 45. fig. 13.
Hab. British Islands. *Hunterian.*
- F 320. The Small Yellow Underwing Moth, *Anarta arbuti*, Fabr. sp.
Fig. Wood, Ind. Ent. tab. 17. fig. 414.
Hab. British Islands. *Hunterian.*
- F 321. The Light Crimson Underwing, *Catocala promissa*, Steph. Brit. Ent. Haust.
vol. iii. p. 134.
Fig. Westw. and Humphr. vol. i. tab. 56. fig. 3.
Hab. British Islands. *Hunterian.*

- F 322. The Red Underwing, *Catocala nupta*, Linn. Syst. Nat. vol. ii. p. 841.
Fig. Westw. and Humphr. tab. 55. fig. 5.
Hab. British Islands. *Hunterian.*
- Family *Geometridæ*.
- F 323. The Frosted Yellow Moth, *Speranzia limbaria*, Fabr. sp.
Fig. Wood, Index Ent. tab. 18. fig. 452.
Hab. British Islands. *Hunterian.*
- F 324. The Mottled Umber Moth, *Erannis defoliaria*, Linn. sp.
Fig. Curtis, Brit. Ent. tab. 703.
Hab. British Islands. *Hunterian.*
- F 325. The Scolloped Oak Moth, *Crocallis elinguaris*, Linn. sp.
Fig. Westw. and Humphr. vol. ii. tab. 59. figs. 3, 4.
Hab. British Islands. *Hunterian.*
- F 326. The September Thorn Moth, *Odoptera erosaria*, Schiff. sp.
Fig. Wood, Index Ent. tab. 18. fig. 476.
Hab. British Islands. *Hunterian.*
- F 327. The *Angerona prunaria*, Linn. Syst. Nat. vol. ii. p. 520 (*Phalæna prunaria*).
Fig. Westw. and Humphr. vol. ii. tab. 59. figs. 22-25.
Hab. British Islands. *Hunterian.*
- F 328. The Common White Wave Moth, *Cabera pusaria*, Linn. sp.
Fig. Westw. and Humphr. vol. ii. tab. 61. figs. 13, 14.
Hab. British Islands. *Hunterian.*
- F 329. The Blood-vein Moth, *Bradyepetes amataria*, Linn.
Fig. Wood, Index Ent. pl. 20. fig. 533.
Hab. Britain. *Hunterian.*
- F 330. The Bordered Beauty Moth, *Epione apiciaria*, Schiff. sp.
Fig. Donovan. Brit. Insects, vol. vii. pl. 233. fig. 3.
Hab. British Islands. *Hunterian.*

- F 331. The Slender Treble-bar Moth, *Anaitis plagiata*, Linn. sp.
Fig. Westw. and Humphr. tab. 64. fig. 25.
Hab. Britain. *Hunterian.*
- F 332. The Small Mallow Moth, *Eubolia mensuraria*, Schiff. iii.
Fig. Westw. and Humphr. vol. ii. tab. 62. fig. 17 (*Larentia chenopodiaria*).
Hab. British Islands. *Hunterian.*
- F 333. The Garden Carpet Moth, *Coremia fluctuata*, Linn. sp.
Fig. Westw. and Humphr. vol. ii. tab. 63. figs. 12, 13.
Hab. British Islands. *Hunterian.*
- F 334. The Clouded Yellow Moth, *Harpalyce fulvata*, Forster, sp.
Fig. Wood, Index Ent. tab. 21. fig. 561.
Hab. British Islands. *Hunterian.*
- F 335. The July Highflyer, *Hydriomena elutata*, Schiff.
Fig. Hübn. tab. 74. figs. 381, 385.
Hab. British Islands. *Hunterian.*
- F 336. The Marbled Carpet Moth, *Polyphasia russata*, Schiff.
Fig. Wood, Index Ent. tab. 21. figs. 578. 580, &c. (var.).
Hab. British Islands. *Hunterian.*
- F 337. The *Thera simulata*, Hübner.
Fig. Wood, Index Ent. tab. 23. fig. 636.
Hab. Britain. *Hunterian.*
- F 338. The Bordered Lime-speck Moth, *Eupithecia succenturiata*, Linn. sp.
Fig. Wood, Index Ent. tab. 24. fig. 679.
Hab. British Islands. *Hunterian.*
- F 339. The *Triphosa dubitata*, Linn. sp.
Fig. Wood, Index Ent. tab. 23. fig. 622.
Hab. Britain. *Hunterian.*

- F 340. The Yellow Shell Moth, *Camptogramma bilineata*, Linn. sp.
Fig. Wood, Index Ent. tab. 23. f. 625.
Hab. Britain. *Hunterian.*
- F 341. The Speckled Yellow Moth, *Venilia maculata*, Linn.
Fig. Wood, Index Ent. pl. 25. f. 710.
Hab. British Islands. *Hunterian.*
- F 342. The Wood Carpet Moth, *Melanthia rivata*, Hübn. sp.
Fig. Hübn. t. 79. f. 409.
Hab. British Islands. *Hunterian.*
- F 343. The Chimney-sweeper Moth, *Odezia chærophyllata*.
Fig. Wood, Index Ent. t. 24. f. 686.
Hab. Britain. *Hunterian.*
- F 344. The Lace Border Moth, *Ptychopoda ornata*, Schiff. sp.
Fig. Wood, Index Ent. t. 25. f. 717.
Hab. British Islands. *Hunterian.*
- F 345. The Riband Wave Moth, *Acidalia aversata*, Linn. sp.
Fig. Wood, Index Ent. t. 26. f. 728.
Hab. British Islands. *Hunterian.*

Family *Pyralidæ*.

- F 346. The Crimson and Gold Moth, *Pyrausta purpuralis*, Linn. sp.
Fig. Hübn. pl. 6. f. 37.
Hab. British Islands. *Hunterian.*
- F 347. The Yellow-stigma'd Grey Moth, *Eudorea pyralella*, Hübn. sp.
Fig. Hübn. t. 24. f. 167.
Hab. British Islands. *Hunterian.*

Family *Tortricidæ*.

- F 348. The Green Silver-lines Moth, *Hylophila prasina*, Linn.
Fig. Westw. and Humphr. vol. ii. pl. 79. f. 1-3.
Hab. Britain. *Hunterian.*
- F 349. A species of *Sarrothripa* allied to *S. reviana*, Schiff.
- F 350. The *Argyrolepis Baumanniana*, Schiff. sp.
Fig. Wood, Index Ent. t. 38. f. 1154.
Hab. British Islands. *Hunterian.*
- F 351. The *Hypercallia Christiernana*, Linn. sp.
Fig. Donovan, Brit. Ins. pl. 20. f. 1.
Hab. British Islands. *Hunterian.*
- F 352. The Common Ermine Moth, *Yponomeuta padella*, Linn. sp.
Fig. Donovan, Brit. Ins. vol. i. pl. 9.
Hab. British Islands. *Hunterian.*

Order HEMIPTERA.

Group GEOCORISÆ.

Family *Pentatomidæ*.

- F 353. The *Pentatoma juniperina*, Linn. sp.
Fig. Panzer, F. I. G. 33. f. 14.
Hab. British Islands. *Hunterian.*
- F 354. The *Cydnus biguttatus*, Linn. sp.
Fig. Hahn, Wanz. Ins. Linn. Syst. Nat. ii. 722.
Hab. British Islands. *Hunterian.*

Family *Miridæ*.

- F 355. The *Miris lævigatus*, Linn. sp.
Fig. Harris, Ex. pl. 26. f. 9.
Hab. British Islands. *Hunterian.*

- F 356. The *Miris flavomaculatus*, Auct.
Fig. Hahn, Wanz. Ins.
Hab. Europe. *Hunterian.*
- F 357. The *Heterotoma spissicornis*, Fabr.
Fig. Donovan, Brit. Ins. iv. pl. 135.
Hab. British Islands. *Hunterian.*
- F 358. The *Capsus capillaris*.
Fig. Harris, Ex. pl. 26. f. 11.
Hab. British Islands. *Hunterian.*
- F 359. The *Capsus icterocephalus*, Auct.
Fig. Hahn Wanz. Ins. ?
Hab. Europe. *Hunterian.*

Family *Reduviidæ*.

- F 360. The Masked Bug, *Reduvius personatus*, Linn. sp.
Fig. Harris, Ex. pl. 26. f. 5.
Hab. British Islands. *Hunterian.*

Family *Hydrometridæ*.

- F 361. The *Gerris paludum*, Fabr. sp.
Fig. Stoll, Cimices, pl. 9. f. 63.
Hab. British Islands. *Hunterian.*
- F 362. The *Gerris lacustris*, Linn. sp.
Fig. Donovan, Brit. Ins. iv. p. 118.
Hab. British Islands. *Hunterian.*
- F 363. The *Hydrometra stagnorum*, Linn. sp.
Fig. Curtis, Brit. Ent. i. pl. 32.
Hab. British Islands. *Hunterian.*

Group HYDROCORISÆ. Water Bugs.

Family *Nepidæ*.

- F 364. The Water Scorpion. *Nepa cinerea*, Linn. sp.
Fig. Donovan, Brit. Ins. i. pl. 18.
Hab. British Islands. *Hunterian.*
- F 365. The *Naucoris cimicoides*, Linn. sp.
Fig. Donovan, Brit. Ins. xi. pl. 381.
Hab. British Islands. *Hunterian.*
- F 366. The Boat Fly. *Notonecta glauca*, Linn.
Fig. Donovan, Brit. Ins. pl. 73.
Hab. British Islands. *Hunterian.*
- F 367. The *Corixa striata*, Linn. sp.
Fig. Donovan, Brit. Ins. v. pl. 176. fig. 1?
Hab. British Islands. *Hunterian.*

Order HOMOPTERA.

Family *Cicadidæ*.

- F 368. The *Cystosoma Saundersii*, Westw.
Fig. Westw. Arc. Ent. pl. 24. fig. 1. Scott, Proc. Zool. Soc. 1852, p. 21.
Hab. Australia. *Purchased.*

Family *Fulgoridæ*.

- F 369. The American Lantern Fly. *Fulgora laternaria*, Linn. sp.
Fig. Roesel, Ins. pls. 28, 29.
Hab. South America. *Purchased.*
- F 370. The Chinese Lantern Fly, *Hotinus candelarius*, Amyot et Serv. Hem. 490.
Fig. Donovan, Ins. China (*Fulgora candelaria*), pl. 14.
Hab. China. *Presented.*
- F 371. The *Cixius nervosus*, Linn. sp.
Fig. Degeer, Ins. iii. pl. 12. figs. 1, 2.
Hab. British Islands. *Hunterian.*

Family *Membracidæ*.

- F 372. The *Membracis cornuta*, Linn. sp.
Fig. Donovan, Brit. Ins. ii. pl. 83.
Hab. British Islands. *Hunterian.*

Family *Cercopidæ*.

- F 373. The *Cercopis sanguinolenta*, Linn. sp.
Fig. Panzer, F. I. Germ. 33. 12.
Hab. Europe. *Hunterian.*
- F 374. The *Aphrophora spumaria*, Linn. sp.
Fig. Panzer, F. I. Germ. 7. 20.
Hab. British Islands. *Hunterian.*
- F 375. The *Aphrophora lineata* (Fabr. sp.), *spumaria*, var.
Fig. Panzer, F. I. Germ. 6. fig. 24.
Hab. British Islands. *Hunterian.*
- F 376. The *Aphrophora impressa*, Steph.
Fig. Steph. Syst. Cat. p. 357.
Hab. British Islands. *Hunterian.*
- F 377. The *Tettigonia interrupta*, Linn. sp.
Fig. Panzer, F. I. Germ. 32. 8. Degeer, Ins. iii. pl. 12. fig. 6.
Hab. British Islands. *Hunterian.*
- F 378. The *Iassus coleoptratus*, Fabr.
Fig. Donovan, Brit. Ins. pl. 138. figs. 5, 6.
Hab. British Islands. *Hunterian.*
- F 379. The *Bythoscopus lanio*, Linn. sp.
Fig. Panzer, F. I. Germ. 4. 23.
Hab. British Islands. *Hunterian.*
- F 380. A series of dissections of different Insects, displaying the various parts forming their skeleton. *Purchased.*

Class II. CRUSTACEA.

The Crustacea are articulated animals; provided with jointed limbs; breathing by gills, sometimes covered sometimes exposed, but not enclosed in special cavities of the body: eyes generally two, compound; antennæ generally four; jaws usually three pairs; foot-jaws to the same number, of which the outer pairs have often the office of feet; and feet (usually five pairs, or when the foot-jaws become feet in function, seven pairs). The skin is usually a solid crust, more or less calcareous, which is cast off at intervals during growth. In the early moultings they sustain a true metamorphosis.

MALACOSTBACA.

PODOPHTHALMA.

Order I. DECAPODA.

Section BRACHYURA.

Family *Inachidæ* (*Macropodiens*, M.-Edw.).Genus *EGERIA*, Latr.

G 1. A species of *Egeria*.

Hab. Indian Ocean.

Presented by Capt. Sir E. Home, Bart., R.N.

Family *Maiadæ*.Genus *CHIONÆCETES*.

G 2. The *Chionæcetes opilio*, jun., O. Fabr.

Fig. Dansk. Vid. S. S. n. s. iii. 181-190.

Hab. Northern Seas.

Presented by John Quekett.

Genus *MITHRAX*, Leach.

G 3. A species of *Mithrax*.

Hunterian.

G 4. The *Mithrax aculeatus*, Herbst.

Fig. Herbst, t. 19. fig. 104. Lam. Anim. sans Vert. v. p. 435.

Hab. West Indies.

Hunterian.

Genus STENORHYNCHUS, Lam.

- G 5. The Spider Crab,
- Stenorhynchus rostratus*
- , Lam.

Fig. Leach, Mal. Pod. pl. 23. fig. 6.*Hab.* British coasts.*Presented by Mr. W. Grant.*

- G 6. The Spider Crab,
- Stenorhynchus rostratus*
- .

Purchased.

Genus ACANTHONYX, Latr.

- G 7. A species of
- Acanthonyx*
- ? (
- Hvenia*
-).

Presented by Capt. Sir E. Home, Bart., R.N.

Family Parthenopidæ.

Genus LAMBRUS, Leach.

- G 8. The
- Lambrus pransor*
- , M.-Edw. i. 358.

Fig. Herbst, ii. pl. 41. figs. 3, 23.*Hab.* Eastern Seas.*Presented by Capt. Sir E. Home, Bart., R.N.*

- G 9. Four specimens of the
- Lambrus longimanus*
- , Linn. sp.

Fig. Rüppell, t. 4. fig. 1.*Hab.* Pondicherry, East Indies.*Presented by Capt. Sir E. Home, Bart., R.N.*

- G 10. A species of
- Lambrus*
- .

Purchased.

- G 11. A species of
- Lambrus*
- .

Purchased.

- G 12. A species of
- Lambrus*
- .

Purchased.

The three preceding species are from Torres Straits.

- G 13. The
- Lambrus serratus*
- ?, M.-Edw.

Fig. Seba, vol. iii. t. 20. fig. 12.*Hab.* Eastern Seas.*Presented by Capt. Sir E. Home, Bart., R.N.*

Genus CRYPTOPODIA, M.-Edw.

- G 14. The *Cryptopodia fornicata*, M.-Edw.
Fig. De Haan, Faun. Jap. t. 20. fig. 2.
Hab. Indian Seas. Presented by Capt. Sir E. Home, Bart., R.N.

Family Canceridæ.

Genus CARPILIUS, Leach.

- G 15. The *Carpilius maculatus*, M.-Edw.
Fig. Herbst, pl. 21. fig. 118. M.-Edw. Crust. i. p. 282.
Hab. Indian Ocean. Presented by Capt. Sir E. Home, Bart., R.N.
- G 16. *Carpilius convexus*, Rüppell.
Fig. M.-Edw. Crust. t. 16. figs. 9, 10.
Hab. Indian Ocean. Presented by Capt. Sir E. Home, Bart., R.N.

Genus CHLORODIUS, M.-Edw.

- G 17. Two species of *Chlorodius*.
Presented by Capt. Sir E. Home, Bart., R.N.

Genus CANCER, Linn.

- G 18. The Common Crab, *Cancer pagurus*, Linn.
Fig. Leach, Mal. Pod. t. 10.
Hab. British coast. Presented by C. S. Bate, Esq., F.L.S.

Genus PILUMNUS, Leach.

- G 19. The *Pilumnus tomentosus*, Latr.
Fig. M.-Edw. Hist. Nat. des Crust. i. p. 418.
Hab. Australia. Presented by Capt. Sir E. Home, Bart., R.N.

Genus ERIPHIA, Latr.

- G 20. *Eriphia lævimana*, M.-Edwards.
Fig. Guérin, Icon. t. 3. fig. 1. M.-Edw. Crust. i. p. 427.
Hab. Indian Ocean. Presented by Capt. Sir E. Home, Bart., R.N.

G 21. The *Eriphia lævimana*.*Fig.* Guérin, Icon. t. 3. fig. 1.*Hab.* Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*G 22. The *Eriphia lævimana*.*Fig.* Guérin, Icon. t. 3. fig. 1.*Hab.* Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*Family *Portunidæ*.Genus *PORTUNUS*, Fabr.G 23. The *Portunus integrifrons*, Latr.*Fig.* M.-Edw. Crust. i. p. 445.*Hab.* Port Essington. *Presented by Capt. Sir E. Home, Bart., R.N.*Genus *NEPTUNUS*, De Haan.G 24. The *Neptunus sanguinolentus*, M.-Edw.*Fig.* Herbst, t. 8. figs. 56, 57. M.-Edw. Crust. i. p. 451 (*Lupa*).*Hab.* Atlantic and Indian Oceans.*Presented by Capt. Sir E. Home, Bart., R.N.*Genus *AMPHITRITE*, De Haan.G 25. The *Amphitrite diacantha*, M.-Edw.*Fig.* Bosc, Crust. f. 5. fig. 3. M.-Edw. Crust. i. p. 451 (*Lupa*).*Hab.* Shores of South America.*Presented by Capt. Sir E. Home, Bart., R.N.*G 26. The *Amphitrite cribraria*, M.-Edw.*Fig.* M.-Edw. Crust. t. 18. fig. 1.*Hab.* Van Diemen's Land. *Presented by Capt. Sir E. Home, Bart., R.N.*Genus *ACHELOUS*, De Haan.G 27. The *Achelous spinimanus*, De Haan?*Fig.* De Haan, Faun. Jap. 8.*Hab.* West Indies. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus THALAMITA, Latr.

- G 28. A species of *Thalamita*. Presented by Capt. Sir E. Home, Bart., R.N.

Family Gecarcinidæ.

Genus GECARCINUS, Leach.

- G 29. The Land Crab, *Gecarcinus ruricola*, Linn. sp.
Fig. Desm. pl. 12. fig. 2. M.-Edw. Crust. p. 63.
Hab. West Indies. Antilles. Presented by John Quekett.

Family Ocypodidæ.

Genus OCYPODE, Fabr.

- G 30. Two specimens of a species of *Ocypode*.
Presented by Capt. Sir E. Home, Bart., R.N.

Family Grapsidæ.

Genus GRAPSUS, Lam.

- G 31. The *Grapsus strigosus*.
Fig. M.-Edw. Hist. Crust. vol. ii. p. 78.
Hab. Red Sea. Hunterian.

Genus NAUTILOGRAPsus, M.-Edw.

- G 32. The *Nautilograpsus minutus*, M.-Edw. (*Planes Linnæana*).
Fig. Herbst, t. 2. fig. 32. M.-Edw. Crust. ii. p. 90.
Hab. Gulf Weed, Atlantic Ocean.
Presented by Capt. Sir E. Home, Bart., R.N.

Family Calappidæ.

Genus CALAPPA, Fabr.

- G 33. The *Calappa granulata*, M.-Edw.
Fig. Herbst, t. 12. figs. 75, 76. M.-Edw. Crust. ii. p. 103.
Hab. Mediterranean. Presented by Capt. Sir E. Home, Bart., R.N.

Family *Leucosiadæ*.

Genus PHILYRA, Leach.

- G 34. The
- Philyra scabriuscula*
- , Leach.

Fig. M.-Edw. Crust. t. 20. figs. 9, 10. Leach, Zool. Misc. iii.*Hab.* Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus LEUCOSIA, Fabr.

- G 35. The
- Leucosia craniolaris*
- , Fabr.

Fig. Desm. Crust. t. 27. fig. 2. Fabr. Ent. Syst. Suppl. 350.*Hab.* Indian Seas. *Presented by John Quekett.*

Genus IXIA, Leach.

- G 35 A. Two specimens of the
- Ixia rhombea*
- , Bell.

Fig. Bell, Proc. Linn. Soc. 1860.*Hab.* China. *Purchased.*

Genus ILIA, Latr.

- G 36. The
- Ilia nucleus*
- , Leach.

Fig. Roux, Crust. Med. t. 8. figs. 1-8.*Hab.* Mediterranean. *Hunterian.*

Genus MYRA, Leach.

- G 37. The
- Myra fugax*
- , Leach.

Fig. Desm. Crust. t. 28. fig. 2. Leach, Zool. Misc. iii. 24.*Hab.* Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*Family *Corystidæ*.

Genus CORYSTES, Latr.

- G 38. The
- Corystes Cassivelaunus*
- ♂, Leach (
- Cancer personatus*
- , Herbst).

Fig. Herbst, t. 12. fig. 73 ♀.*Hab.* British coast. *Presented by T. H. Stewart, Esq.*

Family *Dorippidæ*.

Genus DORIPPE, Fabr.

- G 39. The
- Dorippe quadridentata*
- , Latr.

Fig. Herbst, t. 11. fig. 70. Latr. Hist. Nat. des Crust. t. vi. p. 125.*Hab.* Indian Ocean.*Presented by John Quekett.*

Section ANOMOURA.

Family *Dromiadæ*.

Genus DROMIA, Fabr.

- G 40. The
- Dromia nodipes*
- ?, M.-Edw.

Fig. M.-Edw. Crust. ii. p. 177.*Hab.* New South Wales. *Presented by Capt. Sir E. Home, Bart., R.N.*Family *Homolidæ*.

- G 41. The
- Echidnocerus cibarius*
- , White.

Fig. Ill. Proc. Zool. Soc. 1848, pls. 2, 3 (*Annulosa*).*Hab.* California.*Presented by Capt. Sir E. Home, Bart., R.N.*Family *Raninidæ*.

Genus RANINOIDES, M.-Edw.

- G 42. The
- Raninoides lævis*
- ?, M.-Edw.

Fig. Desm. pl. 19. fig. 2. M.-Edw. Crust. ii. p. 197.*Hab.* Indian Ocean.*Presented by Capt. Sir E. Home, Bart., R.N.*Family *Pterygura* (*Paguridæ*).

Genus PAGURUS, Fabr.

- G 43. The
- Pagurus punctulatus*
- , M.-Edw.

Fig. Voy. Uranie, pl. 73. fig. 2. M.-Edw. Crust. ii. p. 222.*Hab.* Indian Ocean.*Presented by Capt. Sir E. Home, Bart., R.N.*

G 44. The *Pagurus Bernhardus*, M.-Edw.*Fig.* Leach, Mal. t. 26. fig. 1 (*Pagurus streblonyx*, M.-Edw. Crust. ii. p. 215).*Hab.* British Islands.*Presented by T. H. Stewart, Esq.*G 45. The *Pagurus aniculus*, Fabr.*Fig.* Voy. de l'Uranie, pl. 79. fig. 1*Hab.* Locality unrecorded.*Prepared by Mr. H. Goadby.*

Genus BIRGUS.

G 46. The Palm-climbing, Soldier, or Robber Crab, *Birgus latro*, Linn.*Fig.* Herbst, ii. pl. 24. Dana, Crust. U.S. Expl. Exp. pl. 30. fig. 5.*Hab.* East Indian Seas.*Presented.*G 47. The Robber Crab, *Birgus latro*, Linn.*Hab.* Lobos Islands.*Purchased.*

Family Porcellanidæ.

Genus PORCELLANA, Lam.

G 48. The *Porcellana platycheles*, Lam.*Fig.* Desm. Crust. t. 34. fig. 1.*Hab.* British Coast.*Presented by Capt. Sir E. Home, Bart., R.N.*

Genus MEGALOPA, Leach.

G 49. A species of *Megalopa*, Leach.*Fig.* M.-Edw. Crust. ii. p. 260.*Hab.* Cape of Good Hope. *Presented by Capt. Sir E. Home, Bart., R.N.*

Section MACROURA.

Family Scyllaridæ.

Genus SCYLLARUS, Fabr.

G 50. The *Scyllarus Haanii*, Berthold.*Fig.* Götting. Ges. Wiss. 1845, t. 2. figs. 2, 3.*Hab.* Chinese Seas.*Presented by John Quekett.*

Genus THENUS, Leach.

- G 51. The *Thenus orientalis* (*Cancer arctus*, Herbst).
Fig. M.-Edw. Crust. ii. p. 286. Herbst, Krabb. ii. t. 30. f. 1.
Hab. Indian Ocean. *Presented by John Quekett.*

Genus IBACUS, Leach.

- G 52. The *Ibacus ciliatus*, De Haan.
Fig. Faun. Jap. pl. 36. fig. 2.
Hab. Japan and China. *Presented by John Quekett.*

Genus PARRIBACUS, Dana.

- G 53. The *Parribacus antarcticus*, Dana (*Scyllarus antarcticus*, Fabr.).
Fig. Crust. U.S. Expl. Exped. i. p. 517. pl. 32. fig. 6.
Hab. Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family Palinuridæ.

Genus PALINURUS, Fabr.

- G 54. The *Palinurus homarus*, Leach, Linn. Trans. xi. p. 339. (*Palinurus vulgaris*, Latr.).
Fig. Leach, Mal. t. 30.
Hab. British Coast. *Presented by John Quekett.*
- G 55. The Spiny Lobster or Crayfish, *Palinurus homarus* (*P. vulgaris*, Latr.).
Fig. White, Brit. Crust. p. 92.
Hab. South coast, Plymouth. *Presented by T. H. Stewart, Esq.*

Family Thalassinidæ.

Genus THALASSINA, Latr.

- G 56. The *Thalassina scorpionides*?, Latr.
Fig. Cuv. R. A. (Croch. ed.) t. 48. fig. 1.
Hab. Chili. *Presented by Capt. Sir E. Home, Bart., R.N.*

Family *Astacidæ*.Genus *ASTACUS*, Fabr.

- G 57. *Astacus pellucidus*, Tellk.
Fig. Müll. Arch. 1844, p. 383.
Hab. Mammoth Caves, Kentucky. *Presented.*
- G 58. The Common Crayfish, *Astacus fluviatilis*, Fabr.
Fig. White, Brit. Crust. p. 100.
Hab. New River. *Presented by Mr. J. Rowse.*
- G 59. The exuvium of the same Crayfish. *Presented by Mr. J. Rowse.*
- G 60. Three specimens of the Lobster, *Astacus marinus*, Fabr. One in section.
Fig. White, Brit. Crust. p. 101.
Hab. British coast. *Hunterian, and purchased.*

Genus *NEPHROPS*, Leach.

- G 61. Two specimens of *Nephrops Norvegicus*, Leach.
Fig. Leach, Mal. Pod. t. 36. Linn. Trans. xi. 344.
Hab. British coast. *Purchased.*

Family *Penæidæ*.Genus *PENÆUS*, Fabr.

- G 62. A species of *Penæus*.
Hab. Indian Seas. *Presented by Capt. Sir E. Home, Bart., R.N.*

Order II. STOMAPODA.

Family *Squillidæ*.Genus *GONODACTYLUS*, Latr.

- G 63. Two specimens of *Gonodactylus chiragra*, Latr.
Fig. Herbst, t. 34. fig. 2. M.-Edw. Crust. ii. 528.
Hab. Mediterranean. *Presented by Capt. Sir E. Home, Bart., R.N.*

- G 64. The *Gonodactylus scyllarus*, M.-Edw. Crust. ii. 529.

Fig. Cuv. R. A. (Croch. ed.) t. 55. fig. 2.

Hab. Isle of France.

Presented by Capt. Sir E. Home, Bart., R.N.

- G 65. A species of *Squilla*, probably *S. mantis*.

Hab. Isle of France.

Presented.

EDRIOPHTHALMA.

Order III. ISOPODA.

Family *Serolidæ*.

Genus *SEROLIS*, Leach.

- G 66. The *Serolis paradoxus* (*Cymothoa paradoxa*), Fabr.

Fig. Cuv. R. A. (Croch. ed.) t. 64. fig. 3. Fabr. Ent. Syst. ii. 503.

Hab. Falkland Islands.

Presented.

Family *Pycnogonidæ*.

Genus *NYMPHON*, Fabr.

- G 67. The *Nymphon giganteum*?

Hab. Locality unrecorded. *Presented by Capt. Sir E. Home, Bart., R.N.*

Parts of Crustacea.

- G 68. A series of specimens of the Chelæ of various Crustacea, some of which are malformed, others undergoing reparation.

Hunterian, and presented.

- G 69. A large Claw or Chela of a gigantic Crab.

Hunterian.

- G 70. A portion of the Chela of a gigantic Lobster.

Presented.

Hab. America.

The Lobster was purchased in Boston, U.S., for sixpence; thirteen people dined off it; the animal itself was nearly 5 feet long.

ENTOMOSTRACA.

Legion BRANCHIOPODA.

Branchiæ many, attached to the feet.

Order PHYLLOPODA.

Family *Apodidæ*.

Genus APUS, Scopoli.

- G 71. The Shield Shrimp, *Apus cancriformis*, Schæffer.

Fig. Baird, Hist. Brit. Entomostraca, p. 30. pl. 1. figs. 1-3.

Hab. In ponds, Kent.

Presented.

Order CLADOCERA.

Family *Daphniadæ*.

Genus DAPHNIA, Müller.

- G 72. The Branched Water Flea, *Daphnia pulex*, Linn. sp.

Fig. Baird, Hist. Brit. Entomostraca, p. 89. pl. 6. figs. 1-3.

Hab. In pools round London.

Presented.

Legion LOPHYROPODA.

Branchiæ few, attached to the organs of the mouth.

Order OSTRACODA.

Family *Cypridæ*.

Genus CYPRIDINA, M.-Edw.

- G 73. A species of *Cypridina*, allied to *C. Zealandica*, Baird.

Fig. Baird, Proc. Zool. Soc. 1850, p. 257. pl. 17. fig. 11.

Hab. Port Philip.

Presented by Capt. Sir E. Home, Bart., R.N.

Genus CYPRIS, Müller.

- G 74. The Three-striped Water Flea, *Cypris tristriata*, Baird.
Fig. Baird, Hist. Brit. Entomostraca (Ray Soc.), pl. 18. fig. 1.
Hab. Copford, Essex. *Presented by T. R. Jones, Esq., F.G.S.*
- G 75. The Orange Water Flea, *Cypris aurantia*, Jurine.
Fig. Baird, Hist. Brit. Entomostraca, pl. 19. fig. 13.
Hab. Greenwich marshes. *Presented by T. R. Jones, Esq., F.G.S.*
- G 76. The Gibbous Water Flea, *Cypris gibba*, Ramdohr.
Fig. Jones, Tert. Entomostraca, Pal. Soc. pl. 1. fig. 3.
Hab. Regent's Park. *Presented by T. R. Jones, Esq., F.G.S.*
- G 77. The Compressed Water Flea, *Cypris compressa*, Baird.
Fig. Baird, Hist. Brit. Entomostraca (Ray Soc.), pl. 19. fig. 14.
Hab. Regent's Park. *Presented by T. R. Jones, Esq., F.G.S.*

Genus CANDONA, Baird.

- G 78. The Crawling Candona, *C. reptans*, Baird.
Fig. Baird, Hist. Brit. Entomostraca, pl. 19. fig. 3.
Hab. Copford, Essex. *Presented by T. R. Jones, Esq., F.G.S.*
- G 79. The Shining Candona, *C. lucens*, Baird.
Fig. Baird, Hist. Brit. Entomostraca, pl. 19. fig. 1.
Hab. Watford, Herts. *Presented by T. R. Jones, Esq., F.G.S.*

Order XIPHOSURA.

Genus LIMULUS, Fabr.

- G 80. The King Crab, *Limulus Polyphemus*, Latr.
Fig. Desm. Cons. sur les Crust. pl. 51. fig. 1.
Hab. North America. *Purchased*
- G 81. The *Limulus Moluccanus*, Latr. (*Polyphemus gigas*, Lam.)
Fig. Schæffer. Mon. pl. 7. figs. 4, 5.
Hab. Moluccas. *Hunterian.*

Class III. CIRRIPEDIA.

The Cirripeds, or Barnacles, are attached by the anterior end of the head; the archetype composed of seventeen segments; the first three of large size, and generally developed into a carapace forming the valves and stalk, and capable of various movements. The sexes are commonly distinct, but sometimes unisexual, and the metamorphoses complex.

Family *Balanidæ*.

The *Balanidæ* are sessile and symmetrical; the scuta and terga furnished with depressor muscles; the other valves united immoveably together.

Genus *BALANUS*, Auct.

- H 1. A large circular group of the *Balanus tintinnabulum*, Linn., consisting of numerous individuals of various sizes.

Fig. Darwin, Mon. Cirripedia, p. 194. pl. 1.

Hab. Common in the warmer seas.

Purchased.

- H 2. The *Balanus tintinnabulum*, Linn., var. *accopoma*.

Fig. Darwin, *Balanidæ*, pl. 1. fig. *d*.

Hab. Locality unrecorded.

Presented by John Quekett.

- H 3. Four specimens of *Balanus tintinnabulum*, Linn. Two are attached to each other, with the internal opercular valves and cirri preserved.

Hab. Locality unrecorded.

Presented by John Quekett.

- H 4. The *Balanus tintinnabulum*, Linn., var. *zebra*.

Fig. Darwin, *Balanidæ*, p. 195.

Hab. Africa.

Presented by John Quekett.

- H 5. The *Balanus tintinnabulum*, Linn., with a group of small species of *Balanus* attached to it.

Hab. Locality unrecorded.

Hunterian.

- H 6. Two specimens of a gigantic species of *Balanus*.

Hab. Locality unrecorded.

Purchased.

- H 7. A group of a large species of *Balanus* (*B. tintinnabulum*?).

Hab. Locality unrecorded.

Hunterian.

Genus *TETRACLITA*, Schum. (*Conia*, Leach.)

- H 8. A series of specimens of the *Tetracrita porosa*, Gmel. sp. One specimen transversely bisected, showing the cancellated structure of the shell; other specimens attached to each other.

Fig. Darwin, *Balanidæ*, pl. 10. fig. 1. (*Balanus squamosus*, Brug.)

Hab. Feejee Islands. *Presented by Capt. Sir E. Home, Bart., R.N.*

Genus *CHELONOBIA*, Leach.

- H 9. Two specimens of *Chelonobia testudinaria*, Linn.

Fig. *Verruca*, Ellis, Phil. Trans. vol. 50. pl. 34. fig. 12.

Hab. From the back of a Turtle, Ceylon.

Presented by Edgar Layard, Esq.

- H 10. The *Chelonobia caretta*, Spengler.

Fig. Darwin, *Balanidæ*, pl. 14. fig. 2.

Hab. Ceylon.

Presented by Edgar Layard, Esq.

Genus *CORONULA*, Lam.

- H 11. Two specimens of *Coronula balænaris*, Gmel.

Fig. Darwin, *Balanidæ*, pl. 15. fig. 2.

Hab. Attached to Whales in the Southern Ocean.

Presented by John Quekett.

- H 12. The *Coronula diadema*, Linn. sp.

Fig. Darwin, *Balanidæ*, pl. 15. fig. 3.

Hab. Attached to Whales, Arctic and Atlantic Oceans.

Presented.

Genus *TUBICINELLA*, Lam.

- H 13. The *Tubicinella trachealis*, Shaw.

Fig. Shaw, Nat. Miscell. vol. xviii. tab. 726.

Hab. Pacific Ocean, imbedded in the skin of Whales.

Purchased.

Genus PYRGOMA, Leach.

H 14. The *Pyrgoma conjugatum*, Darwin.

Fig. Darwin, Balanidæ, p. 364. pl. 12. fig. 7.

Hab. Red Sea.

Purchased.

Family Lepadidæ.

The *Lepadidæ* have a flexible peduncle, provided with muscles; scuta and terga not furnished with depressor muscles; other valves, when present, not united into an immoveable ring.

Genus LEPAS, Linn.

H 15. The *Lepas anatifera*, Linn.

Fig. Darwin, Lepadidæ, p. 73. pl. 1. fig. 1.

Hab. Attached to floating timber, coast of Devonshire.

Presented by John Quekett.

Genus POLLICIPES, Leach.

Shell multivalve, compressed; valves acuminate, from 18 to 100 in number; latera of the lower whorl numerous, their line of growth directed downwards; subrostrum always present; peduncle variable in length, scaly.

The species of this genus are few and widely distributed; they are found on the coasts of California, Mexico, Peru, and China. *P. cornucopia* ranges from Scotland to Teneriffe (Darwin). Fossil species occur in the Inferior Oolite and Oxford clay; in the latter deposit, attached to the Ammonite shells; also in the Cretaceous and Tertiary strata.

H 16. The *Pollicipes elegans*, Lesson (*Pollicipes ruber*, Sow.).

Fig. Reeve, Conch. Icon. pl. 1. fig. 3.

Hab. Lobos Island, coast of Peru.

Purchased.

H 17. A series of specimens of *Pollicipes mitella*, Linn. sp., in various stages of growth, and with the scaly pedicle, the scales of which are symmetrically

arranged in close whorls. The compressed *capitulum* is formed of about 31 to 34 valves, consisting of the scuta, terga, carina, rostrum, and the upper latera with a single lower whorl of small valves, which vary from 22 to 26 in number.

Fig. Darwin, Mon. Cirripedia, p. 316. pl. 7. fig. 3.

Hab. Coast of China. This species is collected in large quantities on the coast of Macao, and used as food by the natives.

Presented by Capt. Sir E. Home, Bart., R.N.

H 18. A large specimen of *Pollicipes* allied to *P. mitella*.

Hab. Indian Ocean. *Presented by Capt. Sir E. Home, Bart., R.N.*

H 19. The *Pollicipes cornucopia*, Leach.

Fig. Darwin, Lepadidæ, pl. 7. fig. 1.

Hab. Atlantic Ocean. *Presented.*

Genus CONCHODERMA, Olfers.

H 20. The *Conchoderma virgata*, Spengler.

Fig. Darwin, Lepadidæ, pl. 2. fig. 3.

Hab. Attached to ships. *Presented by John Morris, F.G.S.*

H 21. The *Conchoderma aurita*, Linn.

Fig. Darwin, Lepadidæ, pl. 3. fig. 4.

Hab. Attached to ships : world wide. *Presented.*

Genus OXYNASPIS, Darwin.

H 22. The *Oxynaspis cælata*, Darwin.

Fig. Darwin, Lepadidæ, p. 134. pl. 3. fig. 1.

Hab. Attached to Zoophytes. *Presented by T. H. Stewart, Esq.*

Class IV. ANNELIDA.

The *Annelida* are worm-like animals, having a body made up of a series of rings; they have red blood and a well-developed respiratory apparatus; their nervous system consists of a double nervous chord, as in Insects. The class is usually divided into three orders, viz. *Abranchiata*, *Dorsibranchiata*, and *Tubicolæ*; the first name being derived from the absence of branchiæ, the second from the position these organs occupy, whilst the third are so denominated from the fact of their continually residing in tubes, which in some instances have precisely the same structure as the shells of Mollusca.

Order I. ABRANCHIATA.

The animals included in this order have no respiratory apparatus visible externally, the function of respiration being performed by the whole surface of the skin, or, as in the Leeches, by internal pouches or sacs. Some of the Annelides, as the Earthworms, are provided with bristles, or setæ, for locomotion, whilst others, as the Leeches, are without them.

Family I. *Abranchia* without setæ.I 1. A small Leech (*Hirudo*).

Hab. Scotland.

Prepared by Mr. H. Goadby.

I 2. Another species of Leech (*Hirudo*).

Hab. Scotland.

Prepared by Mr. H. Goadby.

Family II. *Abranchia* with setæ.I 3. A species of *Nais*.

Hab. Fresh and brackish waters of Europe.

Purchased.

Order II. DORSIBRANCHIATA.

These animals have their respiratory organs placed equally throughout the length of the body.

- I 4. Three species of *Nereis*.

Prepared by Mr. H. Goadby.

- I 5. The *Polynoe squamata*, Cuv.

Fig. Cuvier, An. Kingd. p. 396.

Hab. British coast.

Prepared by Mr. H. Goadby.

Order III. TUBICOLÆ.

Some of the animals belonging to this division inhabit calcareous tubes, which differ in no respect in their mode of formation and minute structure from the shells of certain Mollusca, the calcareous material being exuded from the external surface of the body of the creature. These tubes are always more or less rough externally, but smooth internally, from which the animals are readily taken out, as they have no muscular attachment to the tube. Many *Tubicolæ*, on the contrary, inhabit tubes composed of horny material, whilst others render the horny matter more solid and durable by cementing to it particles of mud, clay, sand, fragments of shell, and a variety of other foreign substances.

- I 6. The *Amphitrite ventilabrum*, Savigny.

Fig. Ellis, Corall. p. 92. pl. 34.

Hab. Britain.

Prepared by Mr. H. Goadby.

- I 7. The *Pectinaria Belgica*, Pallas, sp

Fig. Lam. Anim. sans Vert. vol. v. p. 602 (*Sabella granulata*, Linn.).

Hab. Weymouth.

Presented by John Quekett.

- I 8. Two specimens of the *Sabellaria alveolata*, Cuvier, sp.

Fig. Ellis, Corall. p. 90. pl. 36 (*Tubularia arenosa*).

Hab. Britain.

Purchased.

- I 9. A large species of *Serpula*.

Hab. Australia.

Presented by Capt. Sir E. Home, Bart., R.N.

- I 10. Two valves of the edible Oyster, to which are attached numerous specimens of *Serpula*.

Hab. Britain.

Hunterian.

- I 11. A group of *Serpulæ*, attached to the upper valve of the common Oyster.
Hab. Britain. *Hunterian.*
- I 12. A group of *Serpulæ* (*Galeolaria* ?), covering a piece of rock.
Hab. Unrecorded. *Presented by Lord Valentia.*

Class V. MYRIAPODA.

The animals composing this class were formerly considered as Insects ; but although resembling them in many points, they differ from them in having more than six legs ; the body generally consisting of a number of joints, each of which bears two pairs of feet. The joints increase in number with the age of the animal, and in some species they even exceed fifty.

Family I. *Chilopoda.*

- K 1. A small, light-coloured Centipede, *Scolopendra morsitans*.
Hab. West Indies. *Presented by John Quekett.*
- K 2. A large Centipede (*Scolopendra*, allied to *S. Hardwickei*). *Purchased.*
- K 3. A dissection of the parts forming the dermal skeleton of a Centipede.
Purchased.

Family II. *Chilognatha.*

- K 4. The *Iulus maximus*, Linn.
Fig. Lam. Anim. sans Vert. vol. v. p. 39.
Hab. South America. *Purchased.*
- K 5. The *Iulus maximus*, Linn. This specimen is dissected, and the segments composing the body, which are 64 in number, are slightly separated from each other. *Purchased.*
- K 6. A smaller species of *Iulus*, similarly dissected. *Presented.*

Class VI. ARACHNIDA.

The *Arachnida* are considered as the most highly organized class of the Articulata; it includes the Scorpions and Spiders, which differ from Insects in having eight legs, and instead of the body being divided into three parts, viz. head, thorax, and abdomen, the first two are united, and have received the name of *cephalothorax*; to it the legs are articulated.

The *Arachnida* are divided into two orders, *Trachearia* and *Pulmonaria*, so named from the structure of their organs of circulation and respiration: in the former there are tracheæ, as in Insects, but no distinct vascular apparatus; in the latter, on the contrary, there are pulmonary cavities and a well-developed circulating system.

Order TRACHEARIA.

- L 1. The Tick of the Tortoise, *Ixodes*, sp. ? *Presented by John Quekett.*
- L 2. The Itch Insect, *Acarus scabiei*, Fabr.
Fig. Lam. Anim. sans Vert. vol. v. p. 72.
Hab. In the ulcers of the itch. *Presented by John Quekett.*
- L 3. The Louse of the Whale, *Pycnogonum balænarum*, Leach.
Fig. Müller, Zool. Dan. tab. 119. figs. 10-12.
Hab. European Ocean, on whales. *Prepared by Mr. H. Goadby.*
- L 4. The *Chelifer Latreillii*, Leach.
Fig. Zool. Miscell. vol. iii. pl. 142. fig. 2.
Hab. In dunghills: common. *Prepared by Mr. H. Goadby.*

Order PULMONARIA.

- L 5. Three specimens of a large Scorpion, *Scorpio afer*, Linn.
Fig. Herbst, Monogr. Scorp. tab. 1.
Hab. East Indies, Ceylon, &c. *Purchased.*

- L 6. The European Scorpion, *Scorpio Europæus*, Linn.

Fig. Lam. Anim. sans Vert. vol. v. p. 114.

Hab. Middle of Europe.

Prepared by Mr. H. Goadby.

- L 7. A similar species of Scorpion, *Scorpio Europæus*, Linn.

Both these specimens are mounted in fluid: the first is intended to show the common plan of setting out the legs and tail, as in the act of running; whereas in the second the tail is curved, and the sting elevated high above the back, which is the correct position.

- L 8. A small Scorpion, *Scorpio Australis*, having its young attached to its back and tail. *Purchased.*

- L 9. The exuvium of a small Scorpion. *Presented by T. H. Stewart, Esq.*

- L 10. A dissection of the parts forming the dermal skeleton of a Scorpion. *Purchased.*

- L 11. The *Phrynus reniformis*, Linn.

Fig. Lam. Anim. sans Vert. vol. v. p. 118.

Hab. East Indies.

Presented by John Quekett.

- L 12. Two specimens of Tarentula, *Mygale fusca*.

Hab. South America.

Purchased.

- L 13. The Tarentula, *Mygale hirsuta*.

Fig. MS. in Coll. Surg.

Hab. South America.

Purchased.

- L 14. The Bird-catching Spider, *Mygale nidulans*, Latr.

Fig. Browne, Jam. pl. 44. fig. 3.

Hab. West Indies.

Purchased.

- L 15. A dissection of the parts composing the dermal skeleton of a species of *Mygale*. *Purchased.*

- L 16. Cocoons of Spiders, carded, and quite ready to be spun with bobbins or spinning-wheel. *Hunterian.*

- L 17. Silk from the cocoon of a Spider, spun, and ready to be used for working. *Hunterian.*

- L 18. Work done with threads of silk taken from the cocoon of a Spider.

Hunterian.

- L 19. Two Purses made of the bag or web of a Jamaica Spider. *Hunterian.*

It appears, from a letter in which the above-described cocoons were enclosed, that, more than a century since, these specimens (the work of a lady residing in France) were sent to a Mr. Thomas Plummer, merchant in London; they subsequently became the property of Mr. Ellis, with whose specimens of Corallines and Zoophytes they were found, and no doubt were purchased, at his sale, by Mr. Hunter.

- L 20. A specimen of Spider's web, 10 inches long by 5 broad; it is quite white, and of considerable toughness.

Presented by Sir Henry Englefield, Bart., 1809.

- L 21. A small forked branch of a tree, attached to which is the geometric web of a large Spider.

Hab. No history recorded.

Purchased.

- L 22. A mass of earth, in the centre of which is the nest of a Mason Spider, *Mygale*, sp. It is about 4 inches in length, and lined with silky material. The cover or lid is made of the same silk, considerably strengthened with sand; and the hinge-joint is composed of silk without any such admixture.

Hab. North Africa.

Presented by E. Heneage, Esq.

- L 23. Two nests of a Mason Spider, *Mygale*, sp., taken from the earth in which they were built.

Hab. South of Europe.

Presented by Prof. W. Gregory, F.R.S.E.

Many other forms of Spiders' Nests will be found in the Natural History Series in spirit, Preparations 356 to 366.

Insect Productions.

- M 1. A small incomplete nest of the Common Wasp, *Vespa vulgaris*.

Presented by Sir A. Carlisle, F.R.S.

- M 2. A small incomplete nest of the Common Wasp, *Vespa vulgaris*, from which sections have been removed to show the interior.

Presented by Sir A. Carlisle, F.R.S.

- M 3. A perfect nest of the Social Wasp, attached to a branch of a fir-tree.

Presented by Sir A. Carlisle, F.R.S.

- M 4. A large nest of the Tree Wasp, *Vespa Britannica*. *Purchased.*

- M 5. Four nests of the Card-maker Wasp: three of them have the outer paper-like coating removed, to show the arrangement of the cells within. These nests are suspended from the branch of a tree, and the opening for the entrance of the insects is at the lowest part.

Hab. Cayenne.

Purchased.

- M 6. A series of rounded balls of clay, each being the nest of a Beetle of the genus *Copris*.

Hab. South America.

Presented by John Quekett.

- M 7. The nest of a large species of Humble Bee.

Hab. South America.

Presented by John Quekett.

- M 8. Portions of Honeycomb: the smaller cells are for the labourers, the larger for the drones; the brown cells detached are royal cells for the Queen Bee.

Purchased.

- M 9. Two nests of the Rose-leaf-cutter Bee, *Megachile centuncularis*, Latr. One is contained in a portion of the branch of an ash, the other has been removed from it.

Presented by Master J. S. Streeter.

- M 10. A series of short branches of a tree upon which a white wax has been deposited by an insect, *Coccus Sinensis*, Westw.

Hab. China.

Presented by W. J. Lockhart, Esq., F.R.C.S.E.

- M 11. Portions of the branches of a tree covered with the resin known as Shell-lac.

Hunterian.

